



EUROPEAN UNIVERSITIES ALLIANCE FOR SUSTAINABILITY:  
RESPONSIBLE GROWTH, INCLUSIVE EDUCATION AND ENVIRONMENT

# THE SECOND LIFELONG LEARNING ANALYSIS REPORT

Task 7.4



**EDITURA  
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DIN ORADEA**

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- DEC Websites, patent fillings, videos, etc. ☐
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| Author (s) and Contributor (s) |                                                                         |              |                                                                 |
|--------------------------------|-------------------------------------------------------------------------|--------------|-----------------------------------------------------------------|
| Person                         | Role in the deliverable (Author, co-author, reviewer, quality reviewer) | Organization | Role in the Project (COO, BEN, AP, STUD., EXT. EXPERTS, OTHERS) |
| Anca Otilia Dodescu            | Co-author                                                               | UO           | COO                                                             |
| Karla Melinda Barth            | Co-author                                                               | UO           | BEN                                                             |
| Maria Cristina Florescu        | Co-author                                                               | UO           | BEN                                                             |
| Laura Nicoleta Bochiş          | Co-author                                                               | UO           | BEN                                                             |
| Cătălin Constantin Pascariu    | Co-author                                                               | UO           | BEN                                                             |
| Marius Tepelea                 | Co-author                                                               | UO           | BEN                                                             |
| Nicoleta Ramona Ciobanu        | Co-author                                                               | UO           | BEN                                                             |
| Julien Kiss                    | Co-author                                                               | UO           | BEN                                                             |
| Adriana Borza                  | Co-author                                                               | UO           | BEN                                                             |
| Adrian Pop                     | Co-author                                                               | UO           | BEN                                                             |
| Guadalupe Francia              | Co-author                                                               | HiG          | BEN                                                             |
| Elisabet Eriksson              | Co-author                                                               | HiG          | BEN                                                             |
| Mikaela Willmer                | Co-author                                                               | HiG          | BEN                                                             |
| Marco Ieva                     | Co-author                                                               | UP           | BEN                                                             |
| Guido Di Lorenzo               | Co-author                                                               | UP           | BEN                                                             |
| Chiara Pedretti                | Co-author                                                               | UP           | BEN                                                             |
| Francesca Zanardi              | Co-author                                                               | UP           | BEN                                                             |
| Patrycja Krzemieniec           | Co-author                                                               | UPWr         | BEN                                                             |
| Małgorzata Klimowicz-Bodys     | Co-author                                                               | UPWr         | BEN                                                             |
| Katarzyna Kosek-Paszkowska     | Co-author                                                               | UPWr         | BEN                                                             |
| Charlène David                 | Co-author                                                               | UA           | BEN                                                             |
| Manon Guyard                   | Co-author                                                               | UA           | BEN                                                             |
| Tom Reilly                     | Co-author                                                               | ATU          | BEN                                                             |
| Jacqueline McCormack           | Co-author                                                               | ATU          | BEN                                                             |
| Linda McGloin                  | Co-author                                                               | ATU          | BEN                                                             |
| Marcella Reilly                | Co-author                                                               | ATU          | BEN                                                             |
| Joao Manuel Valente Nabais     | Co-author                                                               | UE           | BEN                                                             |
| Celia Peralta                  | Co-author                                                               | UE           | BEN                                                             |
| Ana Artur                      | Co-author                                                               | UE           | BEN                                                             |
| Raquel Perez Aloe Valverde     | Co-author                                                               | UEx          | BEN                                                             |
| Jesús Lozano                   | Co-author                                                               | UEx          | BEN                                                             |

|                       |           |      |     |
|-----------------------|-----------|------|-----|
| Belén Suárez Lantarón | Co-author | UEx  | BEN |
| Sara Peligros Garcia  | Co-author | UEx  | BEN |
| Anne Teller           | Co-author | OVGU | BEN |
| Antonio Roselli       | Co-author | OVGU | BEN |

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## ACRONYM LIST:

LLL – Lifelong learning

SDG – Sustainable Developmental Goal

UA: University of Angers, France

UE: University of Évora, Portugal

UEx: University of Extremadura, Spain

UO: University of Oradea, Roamnia

HiG: Högskolan i Gävle University of Gävle, Sweden

OVGU: Otto von Guericke University in Magdeburg, Germany

ATU: Atlantic Technology University, Ireland

UNIPR: University of Parma, Italy

UPWr: Wrocław University of Environmental and Life Sciences, Poland

## ABSTRACT

Recognizing the transformative power of lifelong learning at individual and collective levels, as well as the Alliance's commitment to the principle of equal access to education, lifelong learning (LLL) programs aim to provide effective solutions for both the training needs of adult learners and the needs of the public sector, private and community. This report shows how universities in the EU GREEN Alliance work together to promote lifelong learning opportunities in sustainability, green jobs, and the circular economy. Our initiative is aligned with the European policy "[Lifelong Learning in the EU](#)," which emphasizes the importance of continuous learning.

The initial report presented a detailed description of the lifelong learning (LLL) programs offered by each university in the EU GREEN Alliance. To further strengthen the impact and relevance of these programs, it is essential to ensure their alignment with the Sustainable Development Goals (SDGs) set by the United Nations. These SDGs include:

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reduced Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals

Aligning lifelong learning programs with the 17 Sustainable Development Goals (SDGs) enables universities to develop individuals who are prepared to actively address global challenges, including climate change, inequality, and resource depletion. This strategic alignment not only enhances learners' competencies but also enhances students' competencies and establishes universities as essential contributors to promoting sustainability. For instance, focusing on SDG 13, which emphasizes Climate Action, allows for the integration of curricula that provide students with methodologies for crafting innovative, sustainable solutions to environmental issues. In parallel, aligning with SDG 5, Gender Equality, facilitates the development of inclusive academic environments, empowering women and girls to reach their full potential through education. Prioritizing SDG 4, Quality Education, ensures that lifelong learning initiatives are universally accessible, addressing disparities based on socioeconomic background or other determinants. Furthermore, the alignment with SDG 9, which encompasses Industry, Innovation, and Infrastructure, serves to incubate innovation and entrepreneurship, ultimately driving sustainable economic development.

Through this comprehensive approach, universities can significantly contribute to developing a generation of informed and engaged citizens adept at navigating and addressing the multifaceted challenges that characterize the 21st century.

This report details the educational offerings of member universities, highlighting their role in the SDG orientation and presenting the strengths and differences between educational offerings to develop a valid plan for developing new lifelong learning programs at the alliance level in the future. At the same time, it examines how these institutions integrate lifelong learning principles into their LLL programs, such as inclusion and diversity, flexibility and accessibility, and continuing professional development. The report outlines some directions for developing innovative LLL programs that align with the SDGs.

This forward-looking approach ensures that the Alliance remains at the forefront of sustainable education and training.

## METHODOLOGY USED

Please, in this section do not forget to answer the following questions:

What qualitative indicators are covered in the report?

What quantitative indicators are covered in the report?

What is the impact of the achievement in terms of sustainability and SDGs?

How does this deliverable interact with other tasks, milestones, and deliverables with EU GREEN?

What is the structure of the report?

The second LLL Report aims to analyze in a holistic way the alignment of EU GREEN Alliance universities with sustainability and lifelong learning (LLL) principles.

### Objectives:

- To explain the extent to which the universities of EU GREEN Alliance align its faculties and study programs with sustainability and lifelong learning (LLL) principles.
- To identify strengths, areas for improvement, and potential future directions for enhancing the university's contributions to sustainable development and lifelong education.

### Data Collection:

1. **Data Collection Instrument:** An Excel spreadsheet was developed and completed in the academic year 2022-2023 to gather information from each university in the alliance.
2. **Data Fields:** Include the following fields in the data collection instrument:
  - University Name
  - Faculty/Department
  - Study Program (English and National Language)
  - Level (Bachelor's, Master's, Doctoral)
  - Program Duration
  - ECTS Credits
  - Degree Awarded
  - Year of Study
  - Subjects/Modules
  - Semester
  - Teaching Hours
  - Subject Type (Compulsory/Optional)
  - Form of Teaching (Online/Hybrid/Stationary)
  - Teaching Language

- English Assistance
- SDGs Addressed
- Sustainability-Related Initiatives (e.g., research projects, community partnerships)

### Data Analysis

In this second Report on LLL programs, we will analyze how the EU GREEN Alliance Universities align with sustainability and LLL principles through A holistic approach, as follows:

1. *Keyword Analysis:* Analyze program and faculty names for sustainability-related keywords.
2. *SDG Alignment:* Explain how each university's study programs/courses/modules contribute to achieving the SDGs.
3. *Lifelong Learning Principles*

To analyze how each university in the EU GREEN Alliance is working towards achieving the SDGs, we will be examining the names of faculties and study programs using the following criteria:

- ✓ Keywords: Search for terms like "sustainability," "environment," "ecology," "renewable energy," and "sustainable development," "green" in faculties and/or study programs names and/or specific lifelong learning programs according to the National Education Law.
- ✓ Disciplinary correlations: Identify modules or courses/disciplines closely linked to sustainability themes, such as biology, geography, engineering, economics, and sociology.

To evaluate the alignment of EU GREEN Alliance universities with the principles of lifelong learning, each university may focus on the following dimensions:

- ✓ Inclusion and diversity: Examine how universities in the alliance promote social inclusion and/or diversity in their study programs, including facilities and resources for underrepresented groups of students.
- ✓ Flexibility and accessibility: Assess the extent to which university programs offer diverse learning options (online, hybrid, on campus).
- ✓ Continuing professional development: Investigate the availability of graduate programs, advanced training, or other initiatives supporting the long-term professional development of graduates and professionals.

## **SECTION 1 ALIGNMENT OF UNIVERSITIES FROM THE EU GREEN ALLIANCE WITH SUSTAINABILITY AND THE PRINCIPLES OF LIFELONG LEARNING**

This report will investigate the collaborative efforts of universities within the EU Green Alliance to promote lifelong learning and sustainability. The findings will contribute to a better understanding of the role of higher education in addressing global challenges.

### **ALIGNMENT OF THE UNIVERSITY OF ORADEA WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL**

#### **I. Introduction**

This section explores how the University of Oradea (UO) aligns its faculties and study programs with lifelong learning (LLL) principles and sustainability. We will analyze the university's faculty structure, focus on specific sustainability-oriented offerings, and consider potential areas for further development.

#### **National Framework of Qualification and Educational Offerings at the University of Oradea**

Initial training in higher education is delivered through academic programs organized in four cycles as follows:

1. short cycle, which includes short-length higher education programs
2. cycle 1, which includes bachelor's programs
3. cycle 2, which includes master's programs
4. cycle 3, which includes doctoral programs.

The UO adheres to the National Framework of Qualifications, offering LLL programs across three cycles: bachelor's, master's, and doctoral cycle in higher education. This framework aligns with the Bologna Process, ensuring European compatibility. In 2023-2024, the UO accredited 101 bachelor's programs and 68 master's programs or provisionally authorized them according to the national legislation in force. The UO is accredited to conduct university doctoral studies in five fundamental and 20 doctoral fields, both in-campus and hybrid education.

#### **II. Aligning the University of Oradea with the SDGs: A holistic approach**

The University of Oradea boasts 15 faculties covering a broad spectrum of domains and study programs. The institution offers several programs that are directly aligned with sustainability principles or have significant potential for integrating sustainability concepts. In the following sections, we present a more detailed analysis of how the University of Oradea considers the alignment of bachelor's and master's study programs with the SDGs, the alignment of the doctoral programs, and the alignment of postgraduate training and continuing professional development with the SDGs.

### Undergraduate and Postgraduate Programs aligned to SDGs at the UO

The University of Oradea offers a wide range of undergraduate and postgraduate programs that contribute to achieving multiple SDGs. Table 1.1 provides an overview of the alignment between faculties, study programs for bachelor's and master's degrees, and specific SDGs.

*Table 1.1. Aligning Undergraduate and Postgraduate Programs with SDGs*

| Faculty                                                      | Associated SDGs              | Relevant Study Programs for bachelor's degree              | Relevant Study Programs for master's degree                                                                                                 |
|--------------------------------------------------------------|------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Faculty of Arts                                              | SDG 4, SDG 10                | Music Performance, Visual Arts, Design                     | Pedagogy of conducting art, Fine arts and multimedia, Object Design: Fashion and Ambient                                                    |
| Faculty of Civil Engineering, Cadastre and Architecture      | SDG 9, SDG 11, SDG 15        | Architecture, Civil Engineering                            | Smart and sustainable constructions, Geo-informatics systems in urban planning                                                              |
| Faculty of Law                                               | SDG 16                       | Law, Public Administration                                 | Criminal law and criminal procedure, Civil law and civil procedure, Public Administration                                                   |
| Faculty of Geography, Tourism and Sport                      | SDG 11, SDG 15               | Geography, Spatial Planning, Physical Education and Sports | Tourism management and planning, Physical education and sports training, Physiotherapy and functional re-education                          |
| Faculty of Computer Science and Sciences                     | SDG 4, SDG 8, SDG 9          | Computer Science, Mathematics                              | Biodiversity and ecosystem monitoring, Structural and applied chemistry, Internet distributed systems                                       |
| Faculty of Electrical Engineering and Information Technology | SDG 7, SDG 9, SDG 11, SDG 13 | Electrical Engineering, Applied Electronics                | Advanced automatic systems, Advanced systems in electrical engineering, Audio-video and telecommunications technologies                     |
| Faculty of Energy Engineering and Industrial Management      | SDG 7, SDG 9, SDG 13         | Energy Engineering, Power Systems Engineering              | Renewable energies, Management of energy systems, Quality management, and consumer protection in the textile-leather sector                 |
| Faculty of Managerial and Technological Engineering          | SDG 8, SDG 9                 | Industrial Engineering, Mechatronics                       | Computer-Aided Design, Manufacturing and Management, Advanced Automotive Engineering Systems and Technologies, Advanced Mechatronic Systems |

|                                                                                                 |                               |                                            |                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Faculty of History, International Relations, Political Science and Communication Science</b> | SDG 4, SDG 16, SDG 17, SDG 11 | International Relations, Political Science | Regional development and institutional communication in the European Union, Evaluation of European public policies and programs, European studies                     |
| <b>Faculty of Letters</b>                                                                       | SDG 4, SDG 10, SDG 17         | Foreign Languages, Literature              | European culture and civilization, Types of modernity in the Anglophone and Francophone space, Professional and intercultural communication. Specialized translations |
| <b>Faculty of Medicine and Pharmacy</b>                                                         | SDG 3, SDG 10, SDG 17         | Medicine, Pharmacy                         | Management of locomotor disorders, Health services management, Nutritional education and phytotherapy                                                                 |
| <b>Faculty of Environmental Protection</b>                                                      | SDG 6, SDG 13, SDG 15, SDG 2  | Environmental Engineering, Forestry        | Environmental engineering and occupational safety, Agri-food safety and security, Sustainable valorization of forest resources                                        |
| <b>Faculty of Economics</b>                                                                     | SDG 8, SDG 12                 | Business Administration, Economics         | Regional Business Administration, Tourism and Hospitality Business Administration, Accounting, Auditing and Business Management                                       |
| <b>Faculty of Social Sciences</b>                                                               | SDG 5, SDG 10, SDG 16         | Sociology, Psychology, Social Work         | Social Services Management, inclusive education, Clinical Psychology                                                                                                  |
| <b>Faculty of Orthodox Theology</b>                                                             | SDG 4, SDG 16, SDG 17         | Orthodox Theology                          | Systematic theology on biblical and patristic foundations, Church history, and Christian thought.                                                                     |

As the table demonstrates, the university's programs are designed to address various global challenges. For instance, programs in education, psychology, and social work contribute to improving educational outcomes and reducing inequalities (SDG 4 and SDG 10). In the field of health sciences, programs in medicine, pharmacy, and sports science focus on enhancing health and well-being (SDG 3). To foster sustainable development, environmental science, engineering, and urban planning programs address climate change, sustainable cities, and resource management (SDGs 13, 11, and 15). Additionally, business, economics, and technology programs contribute to economic growth, innovation, and employment (SDGs 8 and 9)

#### Doctoral Programs aligned with SDGs

The University of Oradea offers a range of doctoral domains that contribute to various SDGs (see Table 1.2.). These programs foster advanced research and innovation, addressing critical global

challenges. For example, doctoral programs in environmental science and engineering contribute to SDG 13 (Climate Action) and SDG 15 (Life on Land) by developing sustainable solutions to environmental problems and promoting biodiversity conservation. Additionally, doctoral programs in public health and medicine align with SDG 3 (Good Health and Well-being) by advancing medical knowledge and improving healthcare practices. Furthermore, economics, business, and management programs contribute to SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure) by fostering economic development and innovation.

*Table 1.2. Aligning Doctorate domains with SDGs*

| Doctoral School                                                                               | Domain of Doctorate                                                    | Associated SDGs       |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------|
| Geography                                                                                     | Geography                                                              | SDG 11, SDG 15, SDG 6 |
| Science of Sport and Physical Education                                                       | Science of Sport and Physical Education                                | SDG 3, SDG 4          |
| Engineering Sciences (Electrical Engineering)                                                 | Electrical Engineering                                                 | SDG 7, SDG 9          |
| Engineering Sciences (Electronic Engineering, Telecommunications, and Information Technology) | Electronic Engineering, Telecommunications, and Information Technology | SDG 9, SDG 17         |
| Engineering Sciences (Energy Engineering)                                                     | Energy Engineering                                                     | SDG 7                 |
| Engineering Sciences (Industrial Engineering)                                                 | Industrial Engineering                                                 | SDG 9, SDG 8          |
| Engineering Sciences (Engineering and Management)                                             | Engineering and Management                                             | SDG 9, SDG 8          |
| Agronomy                                                                                      | Agronomy                                                               | SDG 2, SDG 15         |
| Mathematics                                                                                   | Mathematics                                                            | SDG 4, SDG 9          |
| History                                                                                       | History                                                                | SDG 16, SDG 4         |
| Interdisciplinary Studies (Philology)                                                         | Philology                                                              | SDG 4, SDG 16         |
| Theology                                                                                      | Theology                                                               | SDG 16, SDG 5         |
| Music                                                                                         | Music                                                                  | SDG 3, SDG 4          |
| Biomedical Sciences (Medicine)                                                                | Medicine                                                               | SDG 3                 |
| Biomedical Sciences (Dental Medicine)                                                         | Dental Medicine                                                        | SDG 3                 |
| Biomedical Sciences (Pharmacy)                                                                | Pharmacy                                                               | SDG 3                 |
| Biomedical Sciences (Biology)                                                                 | Biology                                                                | SDG 15, SDG 3         |
| Economic Sciences (Economics)                                                                 | Economics                                                              | SDG 8, SDG 1          |
| Economic Sciences (Business Administration)                                                   | Business Administration                                                | SDG 8, SDG 9          |
| Economic Sciences (Finance)                                                                   | Finance                                                                | SDG 8                 |
| Social Sciences (Sociology)                                                                   | Sociology                                                              | SDG 5, SDG 10         |

### Postgraduate Training and Continuing Professional Development aligned with SDGs

The University of Oradea offers a variety of postgraduate training and continuing professional development programs aligned with the SDGs. These programs cater to the needs of working professionals and aim to enhance their skills and knowledge. According to the National Education Law in Romania, postgraduate studies of the following types are carried out in universities:

- postdoctoral study programs
- postgraduate professional training program for adults
- residency postgraduate study programs

The UO offers a variety of six-month postgraduate training courses and professional development courses, each worth 60 credits and delivered online in Romanian. These programs last six and are designed to enhance the skills and knowledge of working professionals and align with the SDGs.

Some of the examples of postgraduate programs and their alignment with the SDGs are listed below:

- **Postgraduate training and continuing professional development programs for teachers:**
  - *Educational management programs:* These programs prepare leaders capable of improving the quality of education at all levels (SDG 4), promoting innovation in education (SDG 9), and ensuring equal access to quality education (SDG 10).
  - *Special psychopedagogy:* This approach focuses on including children with special needs in the educational system, contributing to SDG 4 (quality education) and SDG 10 (reducing inequalities).
  - *Mentoring:* Develop the skills of mentors to support pupils and students, especially those from vulnerable groups, aligning with SDG 4 and SDG 10.
  - *Instructional Design:* Use digital technologies to create effective materials and learning experiences contributing to SDGs 4 and 9.
  - *Early childhood education:* Provides quality education to preschool children, ensuring their holistic development and contributing to SDG 4 and SDG 3 (health and well-being).
  - *Development of e-learning programs:* Promote online learning, facilitating access to quality education for more people, especially in rural or resource-limited areas, aligning with SDGs 4 and 9.
- **Postgraduate training and continuing professional development programs designed for energy engineering:**
  - ✓ *Energy Management in Industry:* Trains specialists to optimize energy consumption in industry, contributing to SDG 7 (clean and affordable energy) and SDG 9 (innovation and infrastructure).
  - ✓ *Local energy management:* Develops skills for effectively managing energy resources at the local level, aligning with SDG 7, SDG 11 (sustainable cities and communities), and SDG 13 (climate action).
  - ✓ *Electrical Industry Auditors and Thermoenergetic Auditors in Industry:* Trains auditors to identify energy-saving potential in various sectors, contributing to SDG 7 and SDG 9.

The UO also collaborates and partners with different institutions and training course providers to offer comprehensive training courses for the teaching and auxiliary staff employed by the UO,

including Enformation—Webex Web of Science. The UO also allows them to participate in Erasmus+ Staff training internships for professional improvement.

### **III. Fostering Lifelong Learning Principles at the UO**

#### **Facilities for underrepresented groups of students**

The University of Oradea has 1,852 budgeted places for undergraduate study programs and 872 for master's degrees. The total number of students enrolled at the University of Oradea is 6,852 in bachelor's programs and 1,740 in master's programs. It should be noted that the university has nine places reserved for Roma in bachelor's programs and 5 in master's programs. At the same time, 573 international students from 65 countries follow different study programs at the University of Oradea. The university's efforts towards inclusivity create a more diverse learning environment. By catering to underrepresented groups, the university broadens the reach of sustainability education and fosters solutions that include diverse perspectives.

The University of Oradea also hosts events dedicated to promoting inclusion, equality, and diversity. These events are part of WP7 of the EU GREEN project and reflect the university's commitment to providing equal opportunities for all students.

#### **Language of Instruction and Sustainability**

The vast majority of study programs are conducted in Romanian, but there are also 17 programs taught in English and French/German and a bachelor's program in Hungarian. Offering a selection of English, French/German, and Hungarian programs broadening accessibility for international students interested in sustainability studies. These multilingual programs can foster international collaboration on sustainability challenges.

#### **Form of Teaching (online/hybrid/stationary) and sustainability**

Most bachelor's and master's degree programs are organized on campus, but there are also six distance-learning bachelor's degree programs and one hybrid. This flexibility can be leveraged to make sustainability education more accessible to a wider audience, promoting lifelong learning.

### **IV. Focus on Specific Sustainability-Oriented Offerings at UO**

Through its involvement in the EU GREEN project, the University of Oradea has actively contributed to lifelong learning and sustainability. Key initiatives include the 19th International Conference on European Integration—New Challenges—EINCO 2023 and the Emerging Markets Economics and Business Conference (2023). These events have served as platforms for knowledge sharing, fostering collaboration among researchers and practitioners, and promoting interdisciplinary approaches to addressing global challenges. By organizing these conferences, the university has aligned with several SDGs. For instance, the events have contributed to SDG 4 (Quality Education) by promoting lifelong learning and capacity building. They have also supported SDG 17 (Partnerships for the Goals) by fostering international collaboration and knowledge exchange.

Furthermore, the university's focus is on diversity and inclusion through events like the "Access, Diversity and Inclusion in the EU GREEN European University Alliance Conference " (2024) and the "Education in the Age of Uncertainty Conference" (2024), which align with SDG 17 (Partnerships for the Goals), SDG 4 (Quality Education), and SDG 10 (Reduced Inequalities). The events brought together education specialists concerned with important issues related to diversity and inclusion. By providing accessible and inclusive learning opportunities, the university empowers individuals from all backgrounds to reach their full potential.

## Conclusion

In conclusion, the University of Oradea has a good foundation for promoting sustainability through its diverse program offerings, commitment to LLL, and flexible learning formats. The University of Oradea has demonstrated a strong commitment to sustainable development by positioning conferences as dynamic lifelong learning programs. These initiatives have enriched the academic landscape and contributed to building a more sustainable and equitable future for all.

The University of Oradea can improve its educational offerings by developing lifelong learning (LLL) programs more deeply anchored in the Sustainable Development Goals (SDGs). By integrating the SDGs more closely into curricula, promoting micro-credentials and personalized learning, and strengthening partnerships with the socio-economic environment, the university can equip graduates with the necessary skills to address the challenges of the 21st century and contribute to the sustainable development of the region and the country.

## ALIGNMENT OF THE UNIVERSITY OF GÄVLE WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### Introduction

This section explores how the University of Gävle (HIG) aligns its faculties and study programs with lifelong learning (LLL) principles and sustainability. We will analyze the university's faculty structure, focus on specific sustainability-oriented offerings, and consider potential areas for further development.

### I. Aligning the University of Gävle with the SDGs: A holistic approach

#### Educational Offerings at the University of Gävle

The university's education, research, and collaboration with the surrounding society are organized into three faculties:

Faculty of Health and Occupational Studies has three departments:

- Department of Occupational Health,
- Psychology and Sports Sciences,
- Department of Social Work, Criminology and Public Health Sciences
- Department of Caring Sciences.

Faculty of Engineering and Sustainable Development

- Department of Building Engineering, Energy Systems, and Sustainability Science
- Department of Computer and Geospatial Sciences
- Department of Electrical Engineering, Mathematics and Science
- Department of Industrial Management, Industrial Design and Mechanical Engineering

Faculty of Education and Business Studies

- Department of Business and Economic Studies
- Department of Humanities
- Department of Educational Sciences

The vast majority of the University's programs and courses incorporate sustainable development to some extent, as reflected in the curricula. All course curricula undergo a mandatory environmental review and are classified into one of the following categories:

- A. The course is predominantly on sustainable development.
- B. The course includes elements of sustainable development.
- C. The course does not yet include elements of sustainable development, but it is possible to incorporate them.
- D. Elements of sustainable development are not relevant for the course.

Most HIG course curricula are classified with the letter B, and at present, it is difficult to provide information about the scope of sustainable development in practice in each course. Further development could also include the ability to retrieve, summarize, and analyze information about environmental review for all course curricula on a university level.

The university is working to clarify which Sustainable Development Goals (SDGs) each program is linked to so that students and teachers have the tools to promote the SDGs.

The HIG works for sustainable development in two ways: directly, by reducing the university's negative environmental impact and resource use. The direct environmental impact is managed in the university's environmental management system. The university's indirect environmental impact is indirectly managed through education and research that contribute to increased sustainability. The University of Gävle has been certified according to ISO 14001 since 2004.

In 2023, the HIG had 6 796 full-time students (women 4 514 and 2 282 men) at undergraduate and advanced levels and 54 PhD students (women 32 and 22 men).

### **Sustainability-Focused Programs and Courses at the University of Gävle**

The University of Gävle offers several programs and courses directly aligned with sustainability principles. Only a few programs have the word “sustainability” in the program's title. Other relevant programs may not have a direct sustainability focus. However, they still contribute to sustainable development in biology, engineering, economics, industrial design, social work, and education sciences, to mention a few. Below, we provide some examples of commissioned programs and courses aligned to sustainability:

#### **Programs:**

- Thesis for master's degree in sustainability science. This program is inherently focused on sustainability.
- Master's program in business studies: Sustainable International Business. This program covers how to integrate sustainability into core business strategies.
- Bachelor of Science in Social Work—Specialization in International Social Work. This program covers human rights, social justice, diversity, and eco-social sustainability.
- Master program in Sustainability Science – Environment and Decision Making. The program involves decision-making support for sustainable development at different levels of society.
- Master program in Decision, Risk, and Policy Analysis. This program focuses on complex concepts such as sustainable development and sustainability that appear in decision-making documents and policies of various kinds.
- Study Program in Spatial Planning. Sustainable development of society permeates the entire program, for example, through the pursuit of a good-built environment.
- Bachelor of Arts in Primary Education. This program addresses issues related to the social aspect of sustainability

#### **Courses:**

- Sustainable Urban Development. Covering topics, concepts, and terminology in sustainable urban development and environmental assessment.
- Health promotion, society, and sustainable development. This section covers topics on health promotion initiatives and sustainable development in a global context.
- Sustainable horticulture and conservation biology. Addresses topics such as techniques and factors that stimulate sustainable horticultural production.
- Group Decision Making and Leadership for Sustainability. This section covers perspectives on leadership and decision-making in sustainable organizations and includes the 'Leading the Sustainable Organization model.'

- Sustainable Development for Secondary School and Upper Secondary School. Include issues related to the development of education on sustainable development in the Swedish school system.
- Technical Systems in a Sustainable Society. The course covers issues related to integrating various systems for increased environmental benefits, human interaction with these systems, and their relationship to natural values. It also discusses the role of environmental technology in the transition towards a more sustainable society.
- International Social Work. The course discusses the implications of economic, political, and cultural dependence on global social work, cross-cultural understanding, and anti-discriminatory and anti-racist social work, including human rights.
- Social work and sustainable development. This course discusses theories and methods related to eco-social work.
- Community work in marginalized neighborhoods. It contains community work and development, empowerment, and anti-oppressive social work.
- Research Ethics, Researcher Ethics, and scientific integrity. This course is for Ph.D. students and addresses the UN's Sustainable Development Goals.

The University of Gävle also offers courses on sustainability in English, such as Nordic Ecosystems, Sustainability in Management, Environmental Assessment of Buildings, and International Social Work.

### **Postgraduate Studies and Lifelong Learning**

The Swedish higher education policy stipulates that higher education should be free of charge for citizens and that all universities are responsible for promoting lifelong learning. In line with this policy, HIG has chosen its strategy for lifelong learning as one of its six central Education and Research strategies for 2021-2030. The strategy for lifelong learning reads as follows:

"Through developed forms of online learning and investments in innovative learning environments, we take a leading position in lifelong learning."

To enable LLL, HIG offers completely independent courses that are not part of any program and courses that are included in programs. Still, it also has places available for individual applications. The opportunity to take program courses can allow individuals to update their knowledge, enhance their skills, and develop within their profession when their original education was completed many years ago. It is, therefore, an essential opportunity for lifelong learning. For example, education courses give teachers further education. Furthermore, the university is actively working on developing the so-called KUL concept as part of the effort to facilitate lifelong learning. KUL, which stands for competence development for lifelong learning, was initially tested in engineering programs but has now been expanded in a project for broader use across several of the university's educational areas. In short, the concept aims to offer modular courses with open enrollment, self-paced study, and flexibility within and between courses.

Also, in line with the LLL principle of professional development, HIG is one of only three universities in Sweden that offer university education that complements existing foreign education for nurses outside the EU. After completing the one-year bridging program, immigrant nurses can apply for a Swedish nursing license, search for a position, and continue their professional development as registered nurses.

### Alignment of lifelong learning in courses for staff

The Centre for Higher Pedagogical Development (HPC) at HIG organizes in-house courses on staff pedagogical training in higher education. In 2023, HIG had 659 employed staff (371 women and 288 men). Currently, the following course modules are offered:

- New teacher in Higher Education
- The Role of Teachers and Teaching in Higher Education
- Students in Higher Education
- The Exercise of Public Authority in Higher Education
- Supervision of PhD students and the Role of Supervisors

## II. Fostering Lifelong Learning Principles at the University of Oradea

The evaluation of alignment of lifelong learning in these courses is based on the following principles:

- *Inclusion and diversity.* The concepts of inclusion and diversity courses offered at HPC can be assessed from three aspects: Firstly, in terms of organization. HIG is divided into three large faculties. The courses offered by HPC are organized to respond to various pedagogical issues of relevance for all three faculties and are also taught in collaboration. Secondly, in terms of actual course content. All course modules address inclusion and diversity issues to support teachers and researchers in their own teaching, research, and supervision of PhD students. Thirdly, starting in the autumn term of 2025, all course modules will be offered in English and Swedish in parallel, including international members of staff and PhD students with teaching duties who do not speak Swedish.
- *Flexibility and accessibility:* The courses at HPC are offered both on-campus and online. They are timetabled to afternoons to allow for their combination with teaching.
- *Continuing professional development:* HPC's courses are built on progression. The aim is that the courses should be relevant for both beginner and experienced teachers. The course content is continuously revised to be up-to-date with current pedagogical challenges. One example is the planning of courses emphasizing critical thinking and the use of AI tools in teaching, both in line with a view of digital citizenship and its influence on higher education.

### Facilities for underrepresented groups of students

The university's quality policy states that the planning, content, and implementation of teaching should enable a heterogeneous group of students to benefit from their studies at the university. Among other things, the policy states that:

- Students are treated equally and objectively and are given adequate opportunities to become aware of their rights and obligations during their studies.
- Teaching staff should have the knowledge and ability to vary, differentiate, and tailor their teaching to the target group so that students are given equal opportunities to complete their education, regardless of socioeconomic and sociocultural background, ethnicity, gender or gender identity, religion or beliefs, sexual orientation, age, or disability.
- At HIG, the study conditions should be such that it is possible to combine studies with parenthood.

Regarding recruitment, *widening participation* refers to all efforts to promote equality and recruit students from underrepresented social groups. By systematically working on widening participation, HIG creates conditions for broad groups in society to view higher education as an option. In this way, HIG ensures that valuable competence is utilized in education, the workforce, and society. The goal is for HIG's student population to have a balanced gender distribution and reflect the diversity of social backgrounds in the surrounding society. Data for widening participation is monitored annually at the program level.

HIG conducts a Work Environment Survey for students every other year. The student survey is part of the university's systematic work environment and equal opportunities efforts and is regulated in governing documents. The work is goal-oriented and monitored within the management system for the work environment and equal opportunities.

Students from underrepresented groups can also access support during their studies at HIG. These include student health services, study support, study counseling, counseling for perceived victimization, and contact with the equality, diversity, and inclusion coordinator.

In addition, many different resources are available for students who have been granted study support. These include adapted examinations, audiobooks, note-taking assistance, reading and spelling software, and access to resource rooms where students can work silently and use computers with reading and spelling software. The most common forms of support that students with disabilities can access are adapted examinations, such as extended writing time, the use of a computer, and the opportunity to take exams in smaller groups. The number of students granted study support increased from about 100 in 2010 to almost 700 in 2024.

### **Language of Instruction and Sustainability**

Most study programs and courses are conducted in Swedish, but about 50 courses are also taught in English. Offering courses and programs in English broadens accessibility for international students interested in sustainability studies and can foster international collaboration on sustainability challenges. In 2024, the university had 150 international students. Of these, about 70% were at the undergraduate level and the rest at the postgraduate level.

### **Modes of Teaching (campus/ location-based campus/ hybrid/ distance) and Sustainability**

HIG offers a range of programs both on campus and online, creating opportunities to promote lifelong learning. In 2023, 56% of the full-time students were registered on distance-learning programs or courses; of these, about 9% more women than men were registered on distance-learning programs or courses. In addition to these delivery formats, there is also an option to apply for so-called location-based campus education for the Nursing Program, Social Work Program, and Technical Preparatory Year. This format means that students belong to a fixed geographic study group with teaching and meetings at a local campus, away from the main campus in Gävle. This delivery format increases the accessibility for students who, for various reasons, cannot live near the main campus. In conclusion, the HIG has a good foundation for promoting sustainability through its diverse program offerings, commitment to LLL, and flexible learning formats.

## **III. Focus on Specific Sustainability-Oriented Offerings at UG**



### **Sustainability-oriented research**

The University of Gävle has identified four strategic research areas to meet key societal challenges: Health Promoting Work, Innovative Learning, Intelligent Industry, and Urban Sustainability:

- **Health-promoting work.** The focus is on developing and spreading knowledge of how physical and mental health can be promoted for the individual and how organizations and companies can be structured so that the work provides good health while the operations are financially sustainable.
- **Innovative Learning.** In close cooperation with the private and public sectors, the research addresses issues related to structuring education and learning for today and tomorrow to contribute to a long-term sustainable society built on democracy and justice.
- **Intelligent Industry.** Research in intelligent industry is focused on sustainable production, which is a key to creating a sustainable society. One of the major social challenges is providing society with the products and services needed in a sustainable way.
- **Urban Sustainability.** This includes the project Urban Commons, a program centered on interdisciplinary research and collaboration for socially sustainable urban development. It focuses on both existing residential areas and innovative urban planning for urban social sustainability, acknowledging that urban social sustainability requires long-term community work.
- **SEEDS research group of Democracy, Equity, and Social Sustainability.** This is a research group in the field of educational sciences that studies how educational processes and policies are motivated, designed, narrated, and re-narrated in text and practice with a particular focus on democracy, equity, and social sustainability. It investigates issues of individuals' and groups' living conditions, conditions for learning, the teaching profession, and subject constructions in the public sphere as they are considered essential dimensions for promoting social sustainability in learning environments and educational practices in general.

### **Conclusion**

The University of Gävle is dedicated to advancing a sustainable future through its academic programs and research initiatives. By integrating sustainability principles into its curriculum, the university prepares students with the competencies required to address pressing global challenges. Through diverse programs, including sustainability science, social work, and engineering, the institution empowers individuals to become effective agents of positive change. Additionally, the University's commitment to lifelong learning ensures that its impact extends beyond traditional education, providing ongoing opportunities for growth and professional development.

## ALIGNMENT OF THE UNIVERSITY OF PARMA WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### Introduction

This section explores how the University of Parma aligns its faculties and study programs with lifelong learning (LLL) principles and Sustainability. We will examine the university's departmental structure, highlight particular sustainability-focused programs at different levels, and explore potential opportunities for further growth.

### National Framework of Qualification and Educational Offerings at the University of Parma

Training in higher education is delivered through academic programs organized in four cycles as follows:

1. short cycle, which includes short-term professional higher education programs
2. cycle 1, which includes bachelor's programs
3. cycle 2, which includes master's programs
4. cycle 3, which includes doctoral programs.

The University of Parma follows the National Framework of Qualifications, offering programs across bachelor's, master's, and doctoral cycles. This framework is consistent with the Bologna Process, ensuring European compatibility.

In 2024-2025, the University of Parma accredited 49 bachelor's programs, 48 master's programs, and 7 "five-year" master's programs. The University of Parma is accredited to conduct university doctoral studies across 24 schools.

### I. Aligning the University of Parma with the SDGs: A holistic approach

#### Departments and Sustainability-Focused Programs at the University of Parma

The University includes 10 Departments:

- Department of Chemistry, Life Sciences and Environmental Sustainability
- Department of Economics and Management
- Department of Engineering and Architecture
- Department of Food and Drug
- Department of Humanities, Social Sciences, and Cultural Industries
- Department of Industrial Engineering Systems and Technologies
- Department of Law, Politics and International Studies
- Department of Mathematical, Physical, and Computer Sciences
- Department of Medicine and Surgery
- Department of Veterinary Science

They involve a broad spectrum of domains and disciplines. Specifically, the Department of Chemistry, Life Sciences, and Environmental Sustainability directly addresses sustainability issues by offering courses such as Geological Sciences Applied to Environmental Sustainability and

Functional and Sustainable Materials. Moreover, almost all the Departments have integrated sustainability principles.

The University of Parma provides several programs that are directly aligned with sustainability principles or have significant potential for integrating sustainability concepts (the list below includes those programs that, from the title or the description, display an evident link with sustainability, but many other programs embody sustainability principles in their teaching modules):

- Department of Law, Politics and International Studies

**Global Food Law: Sustainability Challenges and Innovation:** it aims to train professionals specialized in the food sector, examining the challenges of sustainability and innovation in the agri-food industry from various legal, political, sociological, agricultural, and economic perspectives.

- Department of Engineering and Architecture

**Sustainable design for the food system:** it emphasizes the potential and currently marginally expressed link between design culture and the food system, looking at scenarios of consumption, management, production, and systemic circularity. You will become a designer! You will be able to face the needs of the production world with a solid design method, an ability to make choices based on environmental, social, and economic sustainability, and a wealth of technical-scientific tools to support your projects.

**Civil and environmental engineering** plays a key role in contemporary society by dealing with various everyday issues. These include the design, construction, surveying, and maintenance of structural works of buildings and infrastructure, the management of water resources, the management and mitigation of natural and man-made hazards, and the analysis of interactions between the ground and works. The degree course aims to train entry-level technical professionals who can contribute to the design and construction process of civil and environmental engineering works.

**Architecture regeneration sustainability** is characterized as a generalist degree course in architecture, capable of providing a broad theoretical basis but oriented towards sustainability and the regeneration of heritage and the local area. The training program is designed to produce graduates who meet the criteria required by the most developed sectors of the construction and building restoration world and the public spheres for building control, conservation of protected existing buildings, and city management.

**Architecture and city sustainability:** Its design focus is on environmental, social, and economic sustainability in the disciplines of architectural design, urban, spatial, and landscape planning, and architectural restoration. To emphasize its vocation for internationality, the course has promoted several educational and scientific cooperation agreements with foreign universities and is also fully offered in English.

**Environmental and land management engineering:** it focuses on growing issues related to environmental and land protection and management that require interdisciplinary and transversal skills. Environmental engineers are familiar with problems related to sustainability, the consumption of natural resources, and the relationship between human actions and the environment. He/she carries out design and construction activities to mitigate anthropogenic impacts on the environment and prevent and protect the territory from natural phenomena.

- Department of Chemistry, Life Sciences and Environmental Sustainability

**Natural and environmental sciences:** The degree Course is aimed at all those who want to make the knowledge, appreciation, protection, and management of nature and the environment their

future profession. The course deals with the study of nature and current environmental dynamics, making it possible to assess the state of conservation of natural environments and providing the quantitative elements to understand the impact of human activities and the complex relationships between the environment and society. The integrated view of nature in its biotic and abiotic components and the numerous field and laboratory activities planned are strengths of the Degree Course that will enable the acquisition of interdisciplinary skills to tackle complex natural and environmental problems. This is also to plan possible interventions to maintain or restore the functioning of natural dynamics that are increasingly threatened.

**Ecology and ethology for nature conservation:** The Second-cycle degree course in Ecology and Ethology for Nature Conservation is aimed at training professionals and researchers with a sound knowledge of the fundamental issues in Ecology and Ethology for Nature Management and Conservation in the current scenario of global climate and environmental changes. After a state examination, registration is allowed in the Register of Biologists. For this reason, the course is an outlet for students from first-cycle degrees in biological sciences and natural and environmental sciences who are interested in acquiring knowledge and professionalism for properly managing natural populations and communities in the context of global change. The program of study includes, in the first year, the teaching of basic subjects common to both ecology and ethology, supplemented by practical exercises: statistical analysis, geobotany, geology, paleoclimatology, and ecology and ethology. In the second year, the more characterizing and specialized subjects of the addresses are explored in depth.

**Geological sciences applied to environmental sustainability:** it will enable you to explore topical issues in depth by following one of the three available cultural curricula focusing on (i) mitigation and management of natural hazards, (ii) fluids, resources, and applications for the environment, (iii) geodynamics and palaeoenvironment for resources. The degree course also has an interdisciplinary connotation that enables the student to integrate Earth Sciences knowledge with Geotechnical Engineering and Ecology, broadening cultural horizons and, therefore, the ability to analyze and solve complex problems. Professional skills will be enhanced through a substantial investment in field activities, educational excursions, laboratory activities, and internships. Many of the course units are designed to teach the 'profession' of geologists, facilitating graduates' rapidly entering the world of work.

**Sciences and technologies for environment and resources:** it provides comprehensive and specialized training in environmental protection and remediation, sustainable spatial development and resource use, and management and evaluation aspects of ecological systems.

**Functional and sustainable materials:** It is an interdisciplinary M.Sc. program in Materials Science that aims to develop broad training in the chemistry and physics of materials with a special emphasis on their application in the circular economy. This program was built on decades of successful collaboration between physicists and chemists at the University of Parma in both research and education. The success of this collaboration is demonstrated by the prestigious recognition of the Department of Chemistry, Life Sciences, and Environmental Sustainability with two back-to-back "Department of Excellence" awards, which have supported our research and education activities with state-of-the-art scientific infrastructure and scholarships to attract motivated students. This program aims to create professionals who understand the challenges of building a circular economy from its physical and chemical roots up to their application in the real world. To do so, our courses strive to constantly show the reality of the concepts shown in class in a laboratory setting. Laboratory courses will teach our students how to create materials, analyze data, design experiments, and formulate hypotheses to improve performances and create knowledge.

- Department of Food and Drug

**Quality and Procurement of Raw Materials for Agri-Food:** it aims at training food graduates with a strong vocational orientation, experts in the evaluation, selection, and procurement of raw materials for industry, catering, and large-scale retail trade, who can guide the choices of actors in the food chain towards products suitable for use/processing. This professional figure will, therefore, represent the link between producers (agricultural sector) and other stakeholders in the supply chain, including consumers.

**Food safety and food risk management:** If you are looking for a Second Cycle Degree Course at the forefront of the modern food sciences, and you want to acquire the ability to face the challenges posed by modern food systems and learn excellent skills in managing the safety of what we eat, we propose to you to become a Food Safety expert. It's possible through a regional course, entirely taught in English, offered by a network formed by the Universities of Parma, Bologna, Cattolica of Piacenza, Modena and Reggio Emilia, Ferrara. Emilia-Romagna region, particularly the Parma District, represents an integrated ecosystem of food industries, research centers, and public institutions fully dedicated to food (for this reason, it's called 'Food Valley'). It is the headquarters of the European Food Safety Authority (EFSA). Foods have a direct impact on human health and well-being. They are the primary way our body comes into contact with the external environment and millions of different compounds. It becomes, therefore, essential for companies, control bodies, and research centers to form specific figures dedicated to risk assessment and management of food risks. The Food Safety expert knows European legislation in the sector and is linked to the global market, which poses logistical challenges and makes the guarantees on ingredients of the food chain less robust, leading to new safety risks.

**Food sciences for innovation and authenticity:** if you are looking for a Second Cycle Degree Course that will form you as a highly skilled professional in the food sciences domain, there is nothing better than a truly international course, entirely taught in English and supported by a network of reputed Higher Education Institutions and food companies. With this course, you will be able to cope with the emerging challenges of the food system linked to demography, environmental changes, globalization, and new science and technology advances to innovate and ensure the quality of the Italian and European food excellences. Indeed, the Parma District has a unique reputation in the international food system.

- Department of Economics and Management

**Economics and management of sustainable food chains:** The Economics and Management of sustainable food chains - CLEMFAS degree course represents an innovative initiative in the Italian university landscape, in which managerial culture is integrated with technological and scientific contributions to produce qualified managerial figures, able to interpret and manage the problems of the agri-food systems with skill and competence. The course originates in the heart of the Food Valley. It brings together the tradition of scientific research and accreditation of the three Departments involved - Economics and Business Sciences, Chemical, Life and Sustainability Sciences, and Food and Drug Sciences - in the extraordinary context of agricultural enterprises, production, distribution, quality certification bodies, and catering that characterize Italy's agri-food system.

**Economics and management of sustainable food environment:** The Second-cycle Degree Course (LM) in Economics and Management of Sustainable Food Environment (Food Quality-FQ), promoted by the Department of Economics and Management in collaboration with the Department of Food and Drug of the University of Parma, is a multidisciplinary project that was set up as a collaborative platform to promote dialogue between economic-managerial culture and

the disciplines related to the social sciences of gastronomy. The Course aims to train professionals with interdisciplinary skills that combine theoretical and empirical knowledge of the cultural and economic-managerial nature of the agri-food system with technological and gastronomic skills related to the enhancement of food in a strict logic of environmental sustainability.

- Department of Veterinary Science

**Innovative and sustainable livestock production** addresses the need to create professional figures with advanced technical-scientific skills in the agro-zootechnical sector. The training course focuses on improving the (environmental, economic, and social) sustainability of production chains—specifically regarding dairy and meat production—and protecting biodiversity and the welfare of farm animals. The course lasts two years, and there is no access limit.

### III. Fostering Lifelong Learning Principles at the UP

#### **Underrepresented groups of students**

The total number of students enrolled at the University of Parma is more than 33,000, with 469 international students. More than 400 students are currently under the guidance of the Welcome and Inclusion Center of the University of Parma. The university's commitment to inclusivity fosters a more diverse learning environment. By addressing the needs of underrepresented groups, the university expands access to sustainability education and encourages solutions incorporating various perspectives. Around 30 students have achieved refugee status, and the University has a specific Rector's delegate for refugees.

#### **Language of Instruction and Sustainability**

The University of Parma offers 104 study programs, 13 of which are taught in the English language.

Providing a range of English-language programs enhances accessibility for international students interested in sustainability studies. These multilingual offerings can promote global collaboration on sustainability challenges.

#### **Form of Teaching (online/hybrid/stationary) and Sustainability**

Bachelor's and master's degree programs are offered mainly on campus (with some exceptions related to LLL programs). Still, numerous online resources and part-time study options are also available to help students integrate their studies into their work routines.

The University of Parma is well-equipped to advance sustainability due to its varied program options, dedication to lifelong learning, and adaptable learning formats.

### III. Focus on Specific Sustainability-Oriented Offerings at UP

#### **Postgraduate Studies and Lifelong Learning**

An office at the University of Parma organizes LLL programs. The University also has a School of Advanced Studies on Food and Nutrition, which offers all types of LLL programs in food science and nutrition.

The LLL programs offered by the University of Parma that are specifically related to sustainability can be summarized below (figures are provisional for specific categories, the data collection is still in progress, or we do not know if the program reached the minimum required number of participants):

**a. Post-graduate master's programs specifically related to sustainability that several Departments offer**

Department of Chemistry, Life Sciences, and Environmental Sustainability

- Packaging
- Environmental Conservation and Wildlife Management

Department of Economics and Management

- Public Procurement in the Healthcare
- Health and Social Services Management

Department of Engineering and Architecture

- Urban Regeneration
- Landscape architecture and water: crisis from droughts to floods

Department of Humanities, Social Sciences, and Cultural Industries

- Audio-visual Translation
- Aba (Applied Behavior Analysis): Evidence-Based Tactics and Strategies for Life Span Learning

Department of Medicine and Surgery

- Family and Community Integrated Care
- Case/Care Management in Hospital And Territory For Healthcare Professions
- Clinical Risk Governance and Health Safety Promotion
- Sport For Inclusion – Disability Management and Innovation

Department of Veterinary Science

- Food Science and Technology - International Master

**b. Continuing professional development and training courses specifically related to sustainability**

**Courses organized by the University of Parma with the cooperation of multiple Departments**

- Transition farm: professional training on sustainable innovation and regeneration: The initiative was created to promote a new model for the territory of Parma, which can trigger a virtuous circle of involvement of young people and local businesses in a perspective of continuous improvement.
- SEED Program—Sustainable Entrepreneurial Ecosystem Development—2023 Edition: The SEED Program is a multidisciplinary “theoretical-practical” training course that includes a maximum of 50 hours of frontal teaching, about ten hours of preparing a paper agreed upon with the teachers, and about six hours of mentoring and networking.

**c. Postgraduate advanced (or improving/upgrading) training programs specifically related to sustainability**

Department of Chemistry, Life Sciences, and Environmental Sustainability

- Histotechnology - an online course

Department of Medicine and Surgery

- Sport Psychology: Health, Training, Competition and Performance

**d. Training programs for teachers/professors only related to topics within the humanities and in the area of sustainability**

The following courses, unless specified otherwise, are all taught in Italian. Topics include:

- Keywords of citizenship - the critical and reflective foundations of intercultural teaching
- Special pedagogy
- Psychology of interpersonal relationships and classroom management in multicultural contexts
- Theory and practice of translation: tools for self-training and teaching

**Other forms of LLL programs specifically related to sustainability**

**School of Advanced Studies on Food and Nutrition**

School of Advanced Studies on Food and Nutrition offers training courses and Summer Schools on food and nutrition, primarily oriented towards PhD students. Examples are listed below:

- Food Authenticity PhD Excellence Academy: the program will follow a multidisciplinary and integrated approach, allowing the students to acquire a proactive vision rooted in scenario analysis, horizon scanning, and supply chain mapping
- Food Science PhD Research Leadership and Communication School - II edition: The course will include active simulations and role-playing, meetings with pioneers in communication and research, and industrial leaders in the field.

**OnFoods Foundation**

OnFoods is a Foundation that is committed to improving the future of the community and the supply chain through a new model of sustainable nutrition. This ambitious goal will be possible thanks to a new and unprecedented form of collaboration between 26 companies involved in the food and nutrition sector, with prestigious universities and research institutes in our country supported by important national companies and cooperatives - Barilla, Bolton Food, Sacco System, De' Longhi, CIRFOOD, Tecnoalimenti, and Confcooperative. The Foundation is essentially a research initiative, but it will also promote training courses and dissemination events to promote health and sustainability. To nurture the professional development of these early career scientists, OnFoods has encouraged young researchers at each Spoke to create a Mentorship Program dedicated to offering advanced training opportunities, not only in their specific scientific fields but also in essential cross-disciplinary skills. Each mentorship program, therefore, encompasses both the specific research areas of each Spoke and areas such as project management, scientific communication, and the complexities of grant proposal writing, all of which are essential for a successful research career.

**Conclusion**

The University of Parma has demonstrated a strong commitment to sustainability and lifelong learning. By integrating sustainability principles into its diverse range of programs, particularly

in fields like environmental science, engineering, and food studies, the university equips students with the knowledge and skills necessary to address global challenges. The institution's focus on lifelong learning, as evidenced by its numerous postgraduate programs, continuing education courses, and flexible learning formats, ensures its impact extends beyond formal education.

## ALIGNMENT OF THE UNIVERSITY OF ENVIRONMENTAL AND LIFE SCIENCES IN WROCLAW WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### Introduction

Wrocław University of Environmental and Life Sciences supports the SDGs directly related to the University's educational and research profile. This stems not only from the specialization – UPWr covers different areas essential to SDG, such as agriculture and other environmental protection issues related to it, food quality, functional food, strategies for combating hunger, analysis of the effects of climate change, and the possibilities of minimizing them – especially by protecting water resources, promoting the idea of short supply chains, modern waste management, research on biologically conditioned social phenomena mainly related to aging processes, or translational medicine, which is of particular interest from the perspective of civilization diseases threat.

#### I. Aligning the UPWr with the SDGs: A holistic approach

The Wrocław University of Environmental and Life Sciences educates and conducts research in nine academic disciplines, each thematically covering areas related to the Sustainable Development Goals (SDGs):

1. Veterinary Medicine
2. Biological Sciences
3. Biotechnology
4. Food and Nutrition Technology
5. Animal Science and Fisheries
6. Agriculture and Horticulture
7. Environmental Engineering, Mining, and Energy
8. Civil Engineering, Geodesy and Transport
9. Social and Economic Geography and Spatial Management

UPWr integrates the Sustainable Development Goals into all study programs, with courses in each discipline directly addressing the contemporary challenges defined by the SDGs. Our university was the first in Poland to launch a Renewable Energy Sources and Waste Management program. UPWr also offers general academic courses related to sustainable development in all first-cycle and long-cycle master's degree programs. These elective courses include topics such as "The Role of Folklore in the Culture of a Nation" (Goal 11) and "Career Planning and Basic Knowledge of the Labor Market" (Goal 8). As part of the "Sustainable Development of the University" project, the courses "Academic Entrepreneurship" (first-cycle and long-cycle master's degree) and "Innovation" (second-cycle and long-cycle master's degree) were introduced in 2019.

At each of UPWr's six faculties, we offer courses that address the topics related to the Sustainable Development Goals:

##### 1. The Faculty of Biology and Animal Science:

- 2 Food Safety - undergraduate studies
  - Human Nutrition and Dietetics (SDGs 2 and 3)
  - Water Treatment Processes (goal 6)

- Plant Biomass - Renewable Energy Source (goal 7)
  - Environmental Protection (goal 15)
  - Animal Welfare (goal 2)
- 3 Bioinformatics - undergraduate studies
  - Environmental Biomonitoring (goal 15)
  - Academic Entrepreneurship (goal 9)
  - Biometeorology (goal 13)
  - Aquatic Biodiversity (goal 14)
- 1 Bioinformatics - master's studies
  - Innovation (goal 9)
  - Bioinformatics Tools in Ex Situ Animal Protection (goal 15)
  - Fundamentals of Business Management (goal 8)
- 2 Biology - undergraduate studies
  - Nature and Environmental Protection (goal 15)
  - Protected Area Management (goal 15)
  - Biometeorology (goal 13)
  - Nutrition Physiology (goal 2)
  - Protected, Endangered, and Rare Plants in Poland (goal 15)
  - General Ecology (goal 15)
- 1 Biology - master's studies
  - Renewable Energy Sources (goal 7)
  - Hydrobiology (goal 14)
  - Biodiversity of Monocot Plants goal 15)
- 2 Human Biology - undergraduate studies
  - Human Sexuality (goal 5)
  - Psychophysiology of Stress (goal 3)
  - Health Education (goal 3)
- 1 Human Biology - master's studies
  - Anti-aging: Promotion of Healthy Aging (SDGs 3 and 10)
  - Work and Rest Physiology (goal 3)
- 2 Animal Science - undergraduate studies
  - Animal Hygiene and Welfare (goal 2)
  - Fisheries Management (goal 14)
  - Natural Utilisation of Animal By-products (goal 2)
  - Ecological and Traditional Processing of Animal Raw Materials (goal 2)
- 1 Animal Science - master's studies
  - Ergonomics in Animal Science (goal 8)
  - Eco-friendly Methods for Farm and Wild Animal Breeding (goal 2)
  - Aquatic Organism Breeding (goal 14)
- 2. The Faculty of Biotechnology and Food Sciences**
  - 2 Biotechnology - bachelor's degree
    - Biotechnological Methods in Environmental Protection (Goal 15)
    - Antioxidants in Food (Goal 2)
    - Unit Operations in Biotechnological Industries (SDGs 2 and 9)
    - Ecology and Environmental Protection (SDGs 15 and 14)
  - 3 Biotechnology - master's degree
    - Green Chemistry (SDGs 13, 9 and 12)

- o Valorization of Food Industry Waste Using Fermentation Processes (SDGs 12 – and 2)
- 1 Gastronomy Technology and Organization - bachelor's degree
  - o Collective Nutrition Organization (SDG 2)
  - o Environmental Protection (SDGs 15, 2 and 14)
  - o Environmental Engineering (SDGs 7, 2 and 9)
  - o Basics of Dietetics (SDG 3)
  - o Food Logistics and Distribution (SDGs 2 and 12)
- 2 Food Technology and Human Nutrition - bachelor's degree
  - o Basics of Human Nutrition (SDGs 2 and 3)
  - o Food Packaging (SDGs 2; 15 and 13)
  - o Food Hygiene and Toxicology (SDGs 2 and 3)
- 1 Food Technology and Human Nutrition - master's degree
  - o Human Nutrition and Dietetics (SDGs 2 and 3)
  - o Organic Food (SDGs 2; 3 and 12)
- 2 Food Quality Management and Analysis - bachelor's degree
  - o Basics of Human Nutrition (SDGs 2 and 3)
  - o Traditional and Regional Food (SDG 11)
  - o Basics of Plant Production (SDGs 2, 3 and 12)
  - o Nutritional Education (SDGs 2 and 3)
  - o Socio-Economic Determinants of Nutrition (SDGs 2 and 3)
  - o Food and Nutrition Safety (SDGs 2, 12 and 3)
- 1 Food Quality Management and Analysis - master's degree
  - o Food Safety (SDGs 2 and 12)
  - o Edible Insects from a Nutritional Perspective (SDGs 2, 12 –and 13)
  - o Interactions Between Drugs and Food (SDGs 2 and 3)
  - o Cultural Determinants of Nutrition and Dietetics (SDGs 2, 3 and 11)
- 3. The Faculty of Spatial Management and Landscape Architecture**
- 2 Landscape Architecture - bachelor's degree
  - o Cultural Heritage Elements in the Landscape (SDG 11)
  - o Ecology (SDGs 15, 11 and 13)
  - o Urban Adaptation to Climate Change (SDGs 11 and 13)
  - o Green Architecture (SDGs 15, 11 and 13)
- 3 Landscape Architecture - master's degree
  - o Green Urbanism (SDGs 15; 11 and 13)
  - o Landscape Protection (SDGs 15 and 11)
- 1 Spatial Economy - bachelor's degree
  - o Spatial Planning in Rural Areas (SDGs 11 and 13)
  - o Natural Conditions for Spatial Management (SDGs 11 and 13)
  - o Greenery in Urban Spaces (SDGs 15, 11 and 13)
- 2 Spatial Economy - master's degree
  - o Strategic Environmental Impact Assessment (SDGs 15; 14; 11 and 13)
  - o Environmental and Natural Resource Management (SDGs 15, 14, 11, and 13)
- 4. The Faculty of Environmental Engineering and Geodesy**
- 1 Civil Engineering - bachelor's degree
  - o Sustainable and Energy-Efficient Construction (SDGs 11, 12 and 15)
  - o River Regulation (SDGs 11, 6; 12; 15 and 14)
- 2 Civil Engineering - master's degree
  - o Innovations (SDG 9)

- o Industrial Construction (SDGs 9 and 11)
- 1 Geodesy and Cartography - bachelor's degree
  - o Basics of Agriculture, Ecology, and Environmental Protection (SDGs 13, 15 and 2)
  - o Classification of Agricultural and Forest Land (SDGs 15 and 13)
  - o Basics of Spatial Planning (SDGs 11 and 13)
- 2 Geodesy and Cartography - master's degree
  - o Innovations (SDG 9)
  - o Forest Valuation (SDGs 15; 13 and 8)
- 1 Environmental Safety Engineering - bachelor's degree
  - o Ecological Safety (SDGs 13, 15 and 3)
  - o Safety of Water and Wastewater Systems (SDGs 6 and 3)
  - o Adaptation to Climate Change (SDG 13)
- 2 Environmental Safety Engineering - master's degree
  - o Safety of Persons with Disabilities (SDGs 10 and 3)
  - o Safety of Technological Processes (SDGs 8, 9 and 12)
- 1 Water Management Engineering - bachelor's degree
  - o Meteorology and Climatology (SDG 13)
  - o Spatial Planning and Management (SDGs 11 and 13)
  - o Water Protection (SDGs 14 and 6)
- 2 Water Management Engineering - master's degree
  - o Innovations (SDG 9)
  - o Water Retention (SDG 6)
  - o Environmental Threats, Protection, and Melioration of Mountain Areas (SDGs 6, 15 and 13)
- 1 Environmental Engineering - bachelor's degree
  - o Biology and Ecology (SDG 15)
  - o Water and Wastewater Technology (SDG 6)
  - o Waste Management (SDGs 13 and 15)
  - o Water Management and Protection (SDGs 14; 6a and 13)
- 2 Environmental Engineering - master's degree
  - o Innovations (SDG 9)
  - o Environmental Management (SDG 13)
  - o Solar and Geothermal Energy (SDGs 7 and 13)
- 5. The Faculty of Life Sciences and Technology**
- 1 Agribusiness - bachelor's degree
  - o Sustainable Management in Agribusiness (SDGs 12, 15, and 2)
  - o Environmental Impact Assessment (SDGs 13, 15 and 11)
- 2 Agribusiness - master's degree
  - o Innovations (SDG 9)
  - o Farm Management (SDGs 2 and 12)
- 1 Agricultural Engineering - bachelor's degree
  - o Precision Agriculture (SDGs 2, 12, and 13)
  - o Renewable Energy in Agriculture (SDGs 7, 13 and 15)
- 2 Agricultural Engineering - master's degree
  - o Sustainable Development in Agriculture (SDGs 2, 12 and 13)
  - o Technology and Innovation in Agriculture (SDGs 9 and 13)
- 6. The Faculty of Veterinary Medicine**
- 1 Veterinary Medicine - Uniform Master's Degree Program (Full-time)

- o Ethology, Animal Welfare, and Protection (SDGs 15, 2 and 13)
- o Animal Production Technologies (SDGs 2 and 9)
- o Wildlife Ecology (SDG 15)
- o Zoonoses (SDG 3)
- o Hygiene of Slaughter Animals and Meat (SDGs 2 and 3)
- o Professional Ethics of Veterinarians (SDG 8)
- o

### III. Fostering Lifelong Learning Principles at the University of UPWr

The University of Wrocław offers flexible and accessible lifelong learning opportunities, catering to the diverse needs of its students and the broader community.

### IV. Focus on Specific Sustainability-Oriented Offerings at UPWr

#### Postgraduate Studies held at the UPWr related to SDG

1. *Winemaking technology* is best suited to:

- SDG 12 - responsible consumption and production
- SDG 8- economic growth and decent work
- SDG 3 - good health and quality of life

These studies respond to the constantly growing needs of farmers, fruit growers, wine growers, and wine producers in the field of responsible, environmentally friendly viticulture and local production. The development of winemaking in Poland contributes, on the one hand, to the increase in employment in this sector of the economy, especially in the countryside, and, on the other hand, to the development of ecotourism and agritourism as a way of actively spending free time.

2. *occupational health and safety management* suits SDG no. 8: "Economic growth and decent work." These studies aim to improve working conditions and, consequently, the quality of work, which translates into economic growth.

3. *MYKO-Med Mycotherapy, the cultivation and processing of edible and medicinal mushrooms,* has several SDGs:

- Good health and quality of life: mushrooms are a valuable food source, providing protein and vitamins. They also contain several biologically active, health-promoting substances that improve the functioning of the human body and are increasingly used medicinally.
- Good quality of education: postgraduate studies align with current trends in lifelong learning and fill the gap in this field related to access to knowledge about the medicinal use of mushrooms.
- Economic growth and decent work: Consumer interest in medicinal mushrooms is growing, but there are few producers of lesser-known species in the Polish market. Substrates and mycelium are available, but fresh mushrooms of species other than champignon and oyster mushrooms almost do not appear on store shelves. Mushrooms constitute a significant income from agricultural production, and increasing their availability will also increase economic growth.

- Responsible consumption and production: Increasing consumer awareness of mushrooms' medicinal and functional use, and perhaps future potential mushroom producers among listeners, will contribute to achieving this goal.

4. Postgraduate studies *Herbs and nutraceuticals - their importance for the economy and health* at the Faculty of Biotechnology and Food Sciences are part of GOOD HEALTH AND QUALITY OF LIFE. Herbs are plants with various flavors and oils, but above all, they have high medicinal values; hence, they have long been widely used in many areas of life. There is a widespread interest in herbal medicine in modern society, which results, among other things, from promoting a healthy lifestyle and the belief that herbal plants help maintain fitness and well-being in everyone. They play an essential role in the prevention of many lifestyle diseases.

5. Postgraduate study *GMP/GHP and Auditing of quality management systems in the food industry* suits SDGs 12 and 6. Quality management systems in the food industry allow us to sustainably produce healthy food.

- 6. Postgraduate study *Ecological and integrated gardening* suits SDGs 2, 13, 15.
- 7. Postgraduate study *Urban gardening* suits SDGs 2, 3 and 12.
- 8. Postgraduate study *Brewing technology* suits SDGs 2, 12.
- 9. Postgraduate study *Nutrition, dietetics, and culinary art* suits SDGs 2, 12, 15.
- 10. Postgraduate study *Horse breeding and riding* suits SDGs 3, 15.
- 11. Postgraduate study *Nursing and breeding of companion animals* suits SDGs 3, 15.
- 12. Postgraduate study *Psychodietetics* suits SDGs 2, 3, 12, 15.

#### **Other LLL programs held at UPWr – workshops and courses related to the Sustainable Development SDGs**

##### **1. SDG 4 – Good quality education:**

- a. organization of training courses for school children and young people aimed at:
  - education for sustainability and sustainable lifestyles (e.g., RES training, 'What do sheep give us? Wool processing workshop and sheepfold tour. Educational excursion', 'Alternatives for a healthy smile, i.e., the acidity of popular drinks and how to determine it'),
  - popularisation of science (e.g., 'Fun with Physics - Lego blocks,' 'Alkacimetric determination of NaOH concentration,' 'Column and thin-layer chromatography');
- b. organization of training courses for adults, providing access to affordable and high-quality technical and vocational education (e.g., 'Cutting of ornamental shrubs and care in landscaped areas,' 'Training in care, care, feeding and legal aspects in sheep and goat farming');
- c. Organisation of training courses for employees, improving the skills of UPWr staff (e.g., 'Working online using IT tools in the cloud,' 'Public speaking, self-presentation, and voice emission').

##### **2. SDG 12 - Responsible consumption and production:**

- training on renewable energy sources, e.g., 'And you, my wind, I am your friend,' 'Testing of photovoltaic panels,' 'Physical properties of biomass fuels';

- training on the protection of biodiversity, e.g., ‘How to preserve the diversity of the small animal world,’ ‘Butterflies - what do we know about them?’, ‘Training on the preservation of biodiversity on farms’; ‘A journey through the kingdom of insects’;
- training on production, consumption, and sustainable lifestyles, e.g., Food pests, What's the deal with DNA? Do we need GMOs?, Gastronomy classes: Evaluation of salt content in food; Evaluation of chocolate and apple juices according to Polish Standards, Training on integrated pest management, ‘Vitamins and minerals in food, determination of vitamin C, calcium and magnesium in selected food products’; ‘Recommended products in the DASH diet - practical workshop.’

### 3. SDG 13 - Climate Action

Through training in the use of RES, the level of education and awareness of climate change mitigation, climate change mitigation is increased.

### 4. SDG 15 - Life on Land

Organization of biodiversity conservation training for school children and teachers, e.g., ‘How to conserve the diversity of the small animal world,’ ‘Biodiversity conservation training on the farm.

## Conclusion

The University of Environmental and Life Sciences in Wrocław actively supports achieving the SDGs through educational and research activities. The university addresses critical global challenges, including food security, climate change, biodiversity loss, and sustainable resource management, by offering programs in fields like agriculture, environmental science, biotechnology, and veterinary medicine.

## ALIGNMENT OF THE UNIVERSITY OF ANGERS WITH SUSTAINABILITY AND THE PRINCIPLES OF LIFELONG LEARNING (LLL)

### Introduction

This section explores how the University of Angers aligns its faculties and study programs with lifelong learning (LLL) principles and sustainability. We will analyze the university's faculty structure, focus on specific sustainability-oriented offerings, and consider potential areas for further development.

#### I. Aligning the University of Angers with the SDGs: A holistic approach

The University of Angers offers various academic programs across multiple faculties, each contributing to different Sustainable Development Goals (SDGs).

#### University Faculty Structure

##### Faculty of Health

- Common entry to health studies
- School of Medicine
- Pharmacy
- Midwifery
- Nursing

##### Faculty of Languages, Humanities, and Social Sciences

- English Studies
- German Studies
- Spanish and Latin American Studies
- Geography
- History
- Applied Foreign Languages
- Literature and Linguistics
- Psychology

##### Faculty of Law, Economics, and Business Studies

- Law and Political Science
- Economics, Finance, and Entrepreneurship

##### Faculty of Science

- Materials (Chemistry, Physics)
- Mathematics and Computer Science
- Plant Science and Environment (Biology, Geosciences)
- Biomedical Science

##### Faculty of Tourism, Culture, and Hospitality

- Tourism, Hospitality, Event Planning, Emerging Worlds, and Tourism Planning and Project Management
- Adventure Sports, Eco-tourism, Wine Tourism and Gastronomy, Equestrian Industry

- Fashion and Textile, Sales and Services
- Heritage, Coastal Cultures, Heritage, and Sailing

#### University School of Management

- Marketing
- Human Resources
- Accounting
- Strategy
- Sales

#### School of Engineering

- Automation and Computer Engineering
- Biology and Health Systems
- Buildings and Safety
- Quality, Innovation, and Reliability Engineering

#### University Institute of Technology

- Social Work
- Business Administration
- Marketing
- Administration and Sales Management
- Electrical Engineering and Computer Science
- Mechanical Engineering
- Applied Biology

Table 1 will delve into the university's faculty structure and explore how its diverse programs contribute to achieving the SDGs.

*Table 1: Alignment of University of Angers Faculties with SDGs*

| Faculty                                                      | Aligned SDGs                                                                                                                                        |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Faculty of Health</b>                                     | SDG 3: Good Health and Well-being                                                                                                                   |
| <b>Faculty of Languages, Humanities, and Social Sciences</b> | SDG 4: Quality Education, SDG 10: Reduced Inequalities, SDG 11: Sustainable Cities and Communities, SDG 16: Peace, Justice, and Strong Institutions |
| <b>Faculty of Law, Economics, and Business Studies</b>       | SDG 8: Decent Work and Economic Growth, SDG 10: Reduced Inequalities, SDG 16: Peace, Justice, and Strong Institutions                               |
| <b>Faculty of Science</b>                                    | SDG 6: Clean Water and Sanitation, SDG 11: Sustainable Cities and Communities, SDG 13: Climate Action, SDG 15: Life on Land                         |
| <b>Faculty of Tourism, Culture, and Hospitality</b>          | SDG 8: Decent Work and Economic Growth, SDG 12: Responsible Consumption and Production, SDG 15: Life on Land                                        |
| <b>University School of Management</b>                       | SDG 8: Decent Work and Economic Growth, SDG 12: Responsible Consumption and Production                                                              |

|                                           |                                                                                                                                             |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>School of Engineering</b>              | SDG 9: Industry, Innovation, and Infrastructure; SDG 11: Sustainable Cities and Communities; SDG 12: Responsible Consumption and Production |
| <b>University Institute of Technology</b> | SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation, and Infrastructure, SDG 11: Sustainable Cities and Communities         |

The University of Angers is strongly committed to aligning its academic programs with the SDGs. By offering a diverse range of programs in fields such as health, humanities, social sciences, science, engineering, and business, the university is equipping students with the knowledge and skills to address global challenges.

## II. Focus on Specific Sustainability-Oriented Offerings at UA

The university offers several degree programs and courses that focus on sustainability and environmental issues, including the following Master's degrees:

### Sea, Manmade Pollution, Diagnosis (Faculty of Science)

- Coastal Dynamics
- Marine Environmental Diagnosis
- Marine Environmental Proxies
- Estuarine Dynamics
- Dynamics of Open Marine Environments
- Development of Indicators for Coastal and Marine Environments
- Marine Biogeosciences Discussions
- Climatic Hotspots (The Arctic and the Mediterranean)

The Master's programs offered in Sea, Manmade Pollution, and Diagnosis are particularly relevant to SDG 14: Life Below Water and SDG 15: Life on Land. These programs prepare students to address critical environmental challenges such as marine pollution, climate change, and biodiversity loss.

### International Hospitality Management (Faculty of Tourism, Culture, and Hospitality)

- Trends and Issues in Global Tourism
- Corporate Social Responsibility in Hospitality
- Organizational Behavior

The Faculty of Tourism, Culture, and Hospitality at the University of Évora offers programs that align with several SDGs, particularly SDG 8: Decent Work and Economic Growth, SDG 12: Responsible Consumption and Production, and SDG 15: Life on Land.

The Master's program in International Hospitality Management, focusing on trends, issues, and corporate social responsibility, equips students with the knowledge and skills to contribute to sustainable tourism practices.

### Buildings and Safety Engineering (School of Engineering)

- Building Reliability and Safety
- Building Thermal Analysis
- Environmental Certifications for Buildings
- Waste Management
- Building Site Safety

- Decision and Risk Control

#### **Biology and Health Systems (School of Engineering)**

- Molecular Detection
- Biomarkers and Bioinformatics
- Stabilization and Degradation
- Hygiene and Food Security
- Waste Management and Environmental Assessment

#### **Quality, Innovation, and Reliability Engineering (School of Engineering)**

- Sustainability Design
- Industrial Optimization
- Statistical Methods and Reliability Models
- Management of Global Performance

The School of Engineering at the UA offers several programs that align with multiple SDGs, including SDG 9: Industry, Innovation, and Infrastructure, SDG 11: Sustainable Cities and Communities, and SDG 12: Responsible Consumption and Production:

- ✓ Building and Safety Engineering programs contribute to sustainable urban development by focusing on building reliability, energy efficiency, and environmental impact assessment. These programs equip engineers with the knowledge and skills to design and construct sustainable buildings that minimize their environmental footprint.
- ✓ Biology and Health Systems programs, on the other hand, align with SDG 3: Good Health and Well-being and SDG 15: Life on Land. By focusing on areas like molecular detection, biomarkers, and environmental assessment, these programs contribute to improving public health and protecting ecosystems.
- ✓ Quality, Innovation, and Reliability Engineering programs are relevant to SDG 9: Industry, Innovation, and Infrastructure. These programs promote sustainable industrial practices and innovation by emphasizing sustainability design, industrial optimization, and reliability engineering.

#### **Management and International Trade (University School of Management)**

- Corporate Social Responsibility
- Social Marketing

#### **International Human Resources Management (University School of Management)**

- Workplace Quality of Life and Diversity Management

The University School of Management at the UA offers programs that align with SDG 8: Decent Work and Economic Growth, SDG 12: Responsible Consumption and Production, and SDG 17: Partnerships for the Goals.

- ✓ The Management and International Trade program, with its focus on corporate social responsibility and social marketing, equips students with the knowledge and skills to operate in a globalized and sustainable economy. By emphasizing ethical business practices, sustainable supply chains, and social impact, the program contributes to responsible business conduct and sustainable development.
- ✓ The International Human Resources Management program aligns with SDG 8 and 5: Gender Equality by focusing on workplace quality of life, diversity, and inclusion.

The ecological transition and equality teams at the University of Angers are currently working on methods to implement training modules on ecological transition for sustainable development (TEDS) in EVERY undergraduate diploma following recent ecological transition policy decisions and recommendations.

Some faculties have already implemented initiatives. For example, the University Institute of Technology delivers the following courses :

- **SDGs in course syllabuses:** Half a day in each of the seven departments is dedicated to cross-disciplinary teaching on:
  - Climate
  - Energy
  - Eco-construction
  - Biodiversity

Additionally, there are optional courses on:

- Solar energy, wind power, biodiversity, and carbon footprint
  - Collaborative serious games on climate, circular economy, digital industries, and textiles
  - Cooking
  - Awareness of gender-based and sexual violence, first aid, and political and social issues
  - Sports, yoga, and sophrology
- **SDGs in project management:**

Students must respect and promote the Sustainable Development SDGs (SDGs) when managing projects as part of their training, reflected in their assessments.

Finally, faculties are introducing a hybrid module (based on a MOOC) on preventing gender-based and sexual violence for undergraduate (bachelor's degree) students.

## Conclusion

The University of Angers is strongly committed to aligning its academic offerings with the SDGs. By offering a diverse range of programs in fields such as environmental science, sustainable tourism, engineering, and social sciences, the university is equipping students with the knowledge and skills needed to address global challenges.

## ALIGNMENT OF ATLANTIC TECHNOLOGICAL UNIVERSITY WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### Introduction: Overview of Atlantic Technological University

Atlantic Technological University (ATU) is one of the largest multi-campus universities on the island, serving a diverse group of learners, staff, communities, and organizations from our region. It offers a rich combination of academic and research excellence, quality of life, and opportunity – all of which can be experienced in the most beautiful part of Ireland. Our collaborative approach ensures that we deliver practice-orientated study and research that seeks to address the significant challenges facing society and the world. As a northern and western multi-campus technological university, we are dedicated to enabling sustainable economic, social, and cultural development connected to our region and with a mindset far beyond it.

ATU was formed in April 2022 by merging three former Institutes of Technology (ITs), each with over 50 years of history of providing tertiary education: Galway Mayo IT, IT Sligo, and Letterkenny IT. More recently, in November 2023, St Angela's College Sligo also became part of ATU, bringing the number of ATU campuses spread along the west/northwest of Ireland to nine.



The university is still very much in the stage of integration of Faculties, Non-Academic Functions, IT systems, policies, and procedures. These tasks have required significant focus, time, and resources since designation as a technological university and are likely to continue for at least another 18-24 months, and the geography of the spread of our campuses is a challenge. In addition, the University has recently finalized its first strategic plan. There is a strong focus on supporting our region in transition, acting as an engine of growth and a magnet for talent to ensure that we serve the needs of our region. Our vision is that we will become an internationally renowned university that enhances the quality of life in our region and creates a sustainable future for all. We endeavor to enrich our area by delivering academic and research excellence and working collaboratively with regional, national, and international partners.

## II. Aligning the ATU with the SDGs: A holistic approach

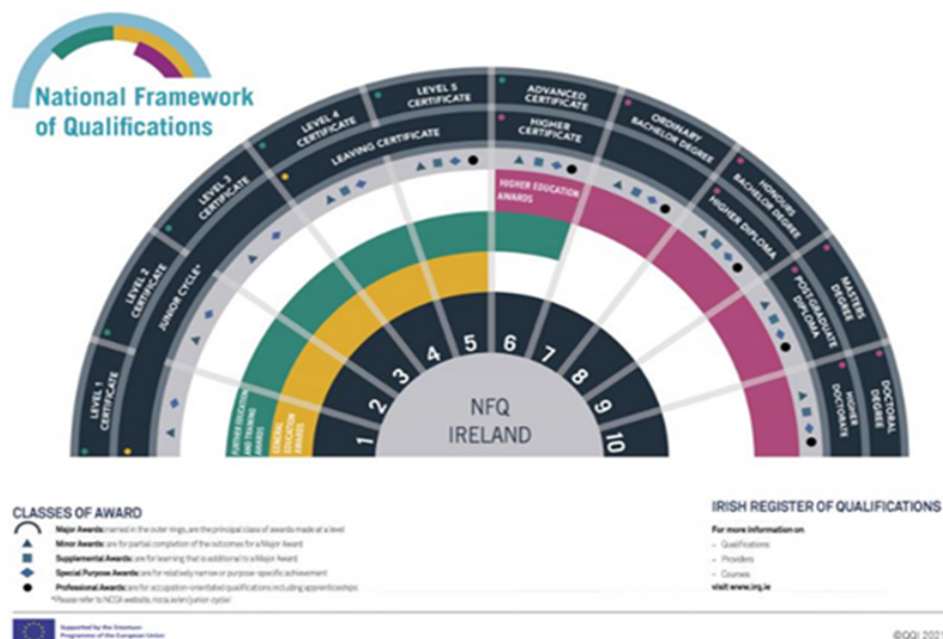
### ATU Faculty structure

ATU is currently forming a new faculty structure. Details are still being finalized, but provisionally, there will be 4 Faculties led by Executive Deans:

- Faculty of Engineering and Computing
- Faculty of Science and Health
- Faculty of Business
- Faculty of Design, Education and Humanities

### Educational policies and legislative regulations in Ireland related to lifelong learning programs

Quality & Qualifications Ireland (QQI) is the state agency responsible for promoting the quality, integrity, and reputation of Ireland's further and higher education system. They ensure that learners achieve qualifications valued nationally and internationally and provide trusted information on the qualifications included in the National Framework of Qualifications. They set standards for QQI awards (qualifications), assess the fitness of providers to offer QQI awards, issue quality assurance guidelines, approve providers' quality assurance procedures, monitor and review providers, and promote awareness and maintenance of academic integrity. The QQI also maintains the Irish National Framework of Qualifications (NFQ) as a system relating different qualification levels to each other and monitoring providers to ensure they offer learners access, transfer, and progression opportunities. In addition, they advise on the recognition of foreign qualifications in Ireland and of Irish qualifications abroad. In Ireland, the qualifications used in the education and training system are described through the National Framework of Qualifications (NFQ). The NFQ classifies the level, class of award, and type of qualifications in Ireland from Level 1 literacy qualifications through to Junior Cycle and Leaving Certificate (secondary school), level 8 (bachelor's honours), and Level 10 doctoral degrees (see diagram below).



The certifications obtained from ATU depend on the cycle, field, duration, or number of credits. At ATU, students can get, for example, a Bachelor's ("ordinary" level) degree, Bachelor's degree with Honours, Postgraduate Diploma, Postgraduate Certificate, Certificate Minor Award in Sci-

ence Special Purpose Award. Special Purpose Awards are programs that address a specific industry's skills gap or meet a certain demand. They are awarded as a Special Purpose Award, typically in certificate format from the major award. Conversion courses enable students to pursue a new career path, which may differ from their original qualification, i.e., cross-skilling instead of upskilling. Conversion courses are available in areas with known skills shortages, e.g., Engineering, Automation, Computing, Biopharma, MedTech, etc.

In the academic year 2023/24, there were 26,692 enrolled students. Of these students, 52% were undertaking full-time, 27% part-time, and 21% e-learning courses. 52% of the students were male, 47% female, and <1% non-binary/undeclared gender. There was a total of 2,166 international students. Of the students, 6% are classified as “mature” students.

### **Lifelong Learning at ATU**

ATU offers a broad range of online, flexible, and professional development courses that respond to student demand and deliver skills employers and employees need. Built on our expertise and in collaboration with industry partners, our accredited courses support students at all academic levels, regardless of their location, to access and continue lifelong learning, develop new skills, and advance their careers. With almost 400 online, blended, and on-campus courses available, ATU offers students fully accredited, flexible qualifications aligned to demand. Online, flexible, and professional development courses help students balance their studies with family and work commitments. We aim to ensure that ATU graduates have the skills and confidence to excel in their chosen careers, create change, and build their future.

Online ATU students attend live lectures through the virtual learning environment. Students can log on from work, home, or anywhere and be part of weekly lectures, engage in discussions, live chat, and interact with fellow students and lecturers. Recorded sessions are available within hours, so students can watch back at a time that suits them. Some of our courses are blended learning, which is a flexible way of completing the course of study, combining online aspects with in-classroom experience to allow for an accessible learning style. In a blended course, students may view lectures, access readings, ask questions, and complete assignments online, so time in the classroom can focus more on discussion and activities. Some of our courses are available for students to study fully on-campus, and students studying an on-campus course will have the full in-classroom experience at ATU. Students learn and experience all the practical elements in the learning outcomes. Guest lectures, tutorials, and residential workshops are accessible to all online students via live streaming or recorded sessions. Peer-to-Peer Learning Working collaboratively is part of the college experience, and part-time learning is no different. Group learning and assignments encourage peer support, and small classroom sizes ensure students are supported throughout the learning journey. We understand that many of our part-time, flexible learning students juggle work and family commitments with their studies. The focus at ATU has always been to deliver a flexible learning experience designed to suit students and their lives.

At ATU Online, Flexible & Professional Development, we develop courses aligned to industry and societal demand. There are some key areas of strength:

**Biopharma:** With all of the top 10 global biopharmaceutical companies located in Ireland, industry demand for continuous professional development is evident. ATU is recognized as a leader in delivering accredited qualifications in bioprocessing, biomedical science, biopharmaceutical science, and pharmaceutical science.

**Industry 4.0:** Digitalisation is enabling a reinvention of manufacturing, which is increasingly moving towards automation and data exchange. Engineering for the future requires skills in automation, cybersecurity, sensor technology, cloud computing, big data, and analytics.

**Medical Device Technology:** As a key location in Europe for medical device manufacturers, Ireland must continuously invest in and develop professionals who can lead the industry.

**Project Management, Leadership & People Management:** With rapid technological advancements, the industry is experiencing the most significant change since the Industrial Revolution. Developing leaders who are equipped to manage complex change programs effectively is essential to staying competitive in our global economy.

**Environmental Sustainability:** Climate change, understanding our environmental responsibilities, and developing strategies and practices to manage our natural resources effectively are relevant to individuals, society, and industry. Local government, state agencies, and industry are investing in technical knowledge, skills, and resources to guide policy, monitor, and manage change.

**Health, Nutrition & Food Innovation:** Delivering effective public health strategies on health promotion, exercise, and nutrition is all part of the evolving remit of healthcare professionals. We must continue to build skills in researching and analyzing health data and develop leaders within our healthcare sector. Innovation and creating sustainable food systems are all part of the Climate Action plan to live as responsible global citizens.

**Educating for the Future:** With the rapidly changing world of work, our Educators are responding with new inclusive and innovative teaching methods to improve access to education, developing supports to ensure students from early years to tertiary level achieve their potential.

**Digital Transformation:** The industry requires skilled technology teams to drive digital transformation, from analytics and DevOps to cybersecurity and software development. The global economy offers graduates opportunities to excel in the digital economy regardless of location.

### III. Fostering Lifelong Learning Principles at the ATU

#### Universal Design for Learning at ATU

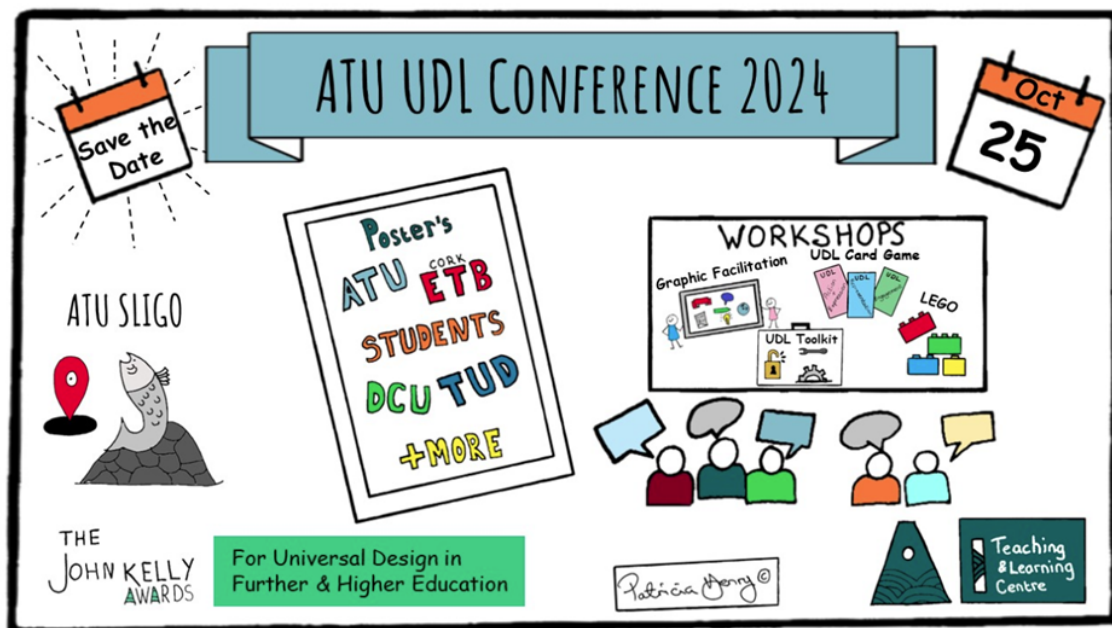
UDL helps educators create inclusive learning environments that cater to diverse learning styles and needs. By valuing every perspective, we can create an equitable environment where everyone has the opportunity to succeed. We can take small steps in our daily practice to make this happen. Our approach is to promote and support using UDL when creating learning materials, planning class activities, and assessing learning.

In Q4 2021, ATU Legacy College established a Centre of Excellence in UDL under the remit of the Teaching & Learning Centre, which works closely with AHEAD/UCD and the UD Regional Hub Network. The UDL Centre of Excellence led the development of the National ALTITUDE Charter project launched in Q1 2024 and led nationally on three path four projects. To support staff in implementing UDL effectively, a suite of digital resources has been created, including a module certificate, a PG Certificate, and a master in UDL.

The *N-TUTORR Project-funded UDL champions (academic staff and students)* have enabled the introduction of inclusive program reviews and the development of a UDL Student Digital Badge, furthering our ongoing efforts to promote inclusive education at our university. The figure below depicts the university's growth in this area.



Nationally, the ATU has played a strong leadership role in promoting universal design, including organizing an annual UDL conference.



ALTITUDE - The National Charter for Universal Design in Tertiary Education was launched recently. The development of the ALTITUDE Charter marks a pivotal step in embedding UD across the sector, aiming to place diversity at the core of educational design and delivery. Supporting ALTITUDE is the Unlocking Inclusion Toolkit, which shares a framework for sustainable UD implementation, promoting collaboration across learning, support services, and physical and digital environments within an institution. ATU has recently established an Altitude Charter working group to begin working towards implementing the charter and enhancing our accessibility and inclusion in higher education at ATU.

#### IV. Focus on Specific Sustainability-Oriented Offerings at ATU

ATU's Centre for Sustainability aims to embed sustainability and the Sustainable Development SDGs (SDGs) as core guiding principles across all ATU activities, focusing on curriculum, campus management and operations, community engagement, collaborative research, and culture.

ATU has a range of dedicated courses focused on sustainability and Sustainable Development SDGs, including:

Certificate in Green Enterprise Skills (Level 6, 25-credit Special Purpose Award)

[B.A. \(Honours\) in Outdoor Education \(Level 8, 4-year program\)](#)

[B.Sc. \(Honours\) in Sustainable Building Technology \(Level 8, one-year add-on\)](#)

[Postgraduate Diploma in Circular Economy Leadership for the Built Environment \(Level 9, 1-year program\)](#)

[M.Sc. in Circular Economy Leadership for the Built Environment \(Level 9, 2-year program\)](#)

[B.A. in Culture and Environment \(Level 7, 3-year program\)](#)

[International M.Sc. in Marine Biological Resources \(Level 9, 2-year program\)](#)

[M.Sc. in Applied Marine Conservation \(Level 9, 1-year program\)](#)

[B.Sc. \(Honours\) in Applied Freshwater and Marine Biology \(Level 8, 4-year program\)](#)

[B.Sc. in Applied Freshwater and Marine Biology \(Level 7, 3-year program\)](#)

[B.Sc. in Agriculture and Environmental Management \(Level 7, 3-year program\)](#)

The Centre for Sustainability also facilitates a dedicated Education for Sustainability module (10 credits) for staff undertaking the [M.A. in Teaching and Learning](#).

### **Sustainability and Curriculum Design at ATU**

ATU has made sustainability a core guiding principle alongside employability and assessment for the program review process to embed sustainability across the curriculum. This endeavor has recently been significantly supported via the N-TUTORR Project. Ireland's technological sector, combining the new technological universities and institutes of technology, has partnered to develop and deliver on the National Technological University Transformation for Recovery and Resilience (N-TUTORR) program. The N-TUTORR program is designed to transform learning, teaching, and assessment by focusing on changing the student experience and developing the capabilities of all staff to address a sustainable pedagogical and learning environment with a particular and critical focus on Academic Integrity, Digital Transformation, Education for Sustainability, Employability, Equality, Diversity and Inclusion (EDI), and Universal Design for Learning (UDL). The European Union and NextGenerationEU fund the N-TUTORR project.

Part of the N-TUTORR Project involved developing a sustainable higher education curriculum framework. This framework is a practical resource designed by partners across the TU sector in collaboration with subject experts to support all staff in engaging with themes of Sustainability, Academic Integrity, EDI, UDL, Employability, and Digital Transformation. The framework considers themes through three distinct categories.

- Rationale - The theory behind the specific theme. What is it, and why is it essential to a substantive and meaningful learning experience?
- Implementation – How can this theme practically manifest in the learning environment as well as assessment design
- Supports – What are the key resources to consider about this theme?

The Curriculum Framework Toolkit, Curriculum Framework Toolkit | Review 360 (articulate.com), underpins the implementation of the framework.

## Curriculum Framework Toolkit

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Welcome to the Curriculum Framework Toolkit.

This toolkit is based on a series of guiding principles which were developed by subject experts across the technological university sector.

This is a reflective resource, designed by the N-TUTORR team to:

- 01 **Prompt** consideration of the 6 themes listed below in your teaching and curriculum design.
- 02 **Curate** resources related to these themes, offering easy access to quality supports.
- 03 **Demonstrate** the exceptional work you have already achieved

[The full guiding principles document can be accessed here](#)

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Sustainability

  
UDL

  
Digital Transformation

  
EDI

  
Academic Integrity

  
Employability

References

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As part of the N-TUTORR project, a team of academic champions have acted as advocates and mentors for sustainable higher education themes and have dedicated several hours weekly to their champion role. The Champions are spread across the ATU campuses and fulfill a broad range of activities, including:

- Undertaking relevant training – as specified by their TU/Institute
- Participation in the stakeholder engagement related to the implementation of the Sustainable Higher Education Curriculum Framework
- Providing guidance and mentorship to academic colleagues in relation to the mapping of the programs and modules to the Sustainable Higher Education Futures Curriculum Framework
- Participation in a Sustainable Higher Education Futures Community of Practice
- Contributing to the planning and development of staff training programs
- Providing mentorship of Student Sustainable higher Education Futures Champions
- Contributing to stakeholder engagement about digital ecosystem-related activities

The Technological University sector in Ireland recruited 100 Student Champions for the N-TUTORR national project. The Student Champion Programme offers students the opportunity to learn and develop skills in one of the key priority areas (Academic Integrity, Digital Transformation, Employability, Equality, Diversity & Inclusion, Education for Sustainability, Universal Design for Learning) in addition to developing leadership, collaboration, and communication skills. To empower students to become change agents, 131 N-TUTORR **'Students as Partners in Innovation and Change' Fellowships** were made available to provide an opportunity for students and staff to collaborate on small-scale enhancement projects aligned to sustainable higher education and the SDGs that will have an immediate impact on the student experience within ATU.

Conclusion

Atlantic Technological University (ATU) is committed to both sustainability and lifelong learning principles. This is evident in:

- ✓ Curriculum: Courses focused on sustainability (e.g., Green Enterprise Skills, Sustainable Building Technology) and a framework for embedding sustainability across all programs.
- ✓ Focus on Lifelong Learning: Offering online, flexible, and professional development courses to cater to diverse needs and schedules.
- ✓ Universal Design for Learning (UDL): Creating inclusive learning environments through resources and initiatives like the UDL Centre of Excellence.

## ALIGNMENT OF THE UNIVERSITY OF ÉVORA WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### Introduction

The University of Évora was the second university to be established in Portugal. After the founding of the University of Coimbra in 1537, the need for another university to serve the South of the country was felt. Évora, an ecclesiastical metropolis and temporary residence of the Court, immediately emerged as the most suitable city. Although the original idea of creating the second university of the Kingdom belonged to D. João III, its implementation has fallen to Cardinal D. Henrique. Interested in teaching issues, he founded the College of the Holy Spirit (Colégio do Espírito Santo), entrusting it to the newly founded Society of Jesus (Companhia de Jesus).

When the work on the building was still underway, the Cardinal asked Rome to transform the College into a full University. With the consent of Pope Paul IV, expressed in the Bull Cum nobis of April 1559, the new University was created, with the right to teach all subjects, except Medicine, Civil Law, and the contentious part of the Canon Law. The solemn inauguration took place on November 1 of that same year. Even today, the University's anniversary is celebrated with the solemn opening ceremony of the academic year.

The main subjects taught were Philosophy, Morality, Scripture, Speculative Theology, Rhetoric, Grammar, and Humanities, which fully inserts this University in the traditional counter-reformist framework of European Catholic institutions of higher education, much of which is, in fact, controlled by the Jesuits.

During the reign of D. Pedro II was introduced the teaching of Mathematics covered subjects as varied as Geography, Physics, and Military Architecture. During the two centuries of its first phase of existence, the prestige of the University of Évora was confused with its professors' prestige and scientific value. Relevant names of Portuguese and Spanish culture were linked to it, and it is important to highlight, first and foremost, Luis de Molina, the theologian and moralist of creativity and European reputation. In Évora, another luminary of the Iberian culture of that time, the Jesuit Francisco Suárez, who was later a professor at the University of Coimbra, received his doctorate. Pedro da Fonseca was also taught here for some time. He was considered the most important Portuguese philosopher from the 16th century, famous for his effort to renew Neo-Scholasticism in Aristotelian thought.

Despite the attempts to modernize and open up the new scientific spirit characterizing the University of the 17th century, it must be recognized that, like what happened with its elder sister in Coimbra, the effort did not translate into the actual opening of minds to the needs of the new times. Notwithstanding the high individual value of many teachers, the broader education system proved to be a misfit and outdated. Thus, Évora participated in the global trend of returning to Transpire Naica Europe, which characterized the majority of elites and Iberian cultural institutions of the Old Regime.

Not surprisingly, when the political and cultural conjuncture of the mid-18th century began to prove hostile to the Jesuits, the University of Évora had easily become a target of Pombal's reform and centralist policy. On February 8, 1759 - two hundred years after its foundation - the University was surrounded by cavalry troops due to the decree to expel and ban the Jesuits. After a long time of seclusion under arms, the masters were eventually taken to Lisbon, where many were imprisoned in the sadly celebrated Fort of Junqueira. Others were summarily deported to the Pontifical States.

Since the second half of the 19th century, the Lycée of Évora was installed in the noble Henrique building, to which Queen Dona Maria II granted the prerogative of the use of "cloak and cassock" regarding the city and building's university tradition.

In 1973, by decree of the then Minister of Education, José Veiga Simão, the University Institute of Évora was created, which was extinct in 1979 to give place to the new University of Évora.

### **I. Aligning the UÉ with the SDGs: A holistic approach**

The University of Évora is structured into five schools, which in turn has several departments, and one institute as follows:

#### **1. School of Arts**

Department of Architecture

Department of Performing Arts

Department of Visual Arts and Design

Department of Music

#### **2. School of Science and Technology**

Department of Biology

Department of Chemistry and Biochemistry

Department of Geosciences

Department of Informatics

Department of Landscape, Environment and Planning

Department of Mathematics

Department of Physics

Department of Plant Science

Department of Rural Engineering

Department of Veterinary Medicine

Department of Zootechny

Mechatronics Engineering Department

#### **3. School of Social Sciences**

Department of Economics

Department of Philosophy

Department of Management

Department of History

Department of Linguistics and Literature

Department of Pedagogy and Education

Department of Psychology

Department of Sociology

#### 4. School of Health and Human Development

Department of Sport and Health

Department of Medical and Health Sciences

#### 5. S. João de Deus School of Nursing

Department of Nursing

#### 6. Institute for Research and Advanced Training

The University of Évora currently offers around 40 undergraduate and more than 100 postgraduate programs, comprising 40 undergraduate degrees, three integrated master's degrees, 64 master's degrees, 34 doctorates, and 19 postgraduate degrees. Research and Development covers various scientific areas through a network of 19 Research Units, all of which have undergone international evaluation under the Institute for Research and Advanced Training (IIFA) coordination.

The University of Évora has been sustainably developing an education, research, and knowledge transfer strategy that allows it to position itself at the regional and national level as a reference in different fields of knowledge, namely biodiversity and climate change, Mediterranean ecosystems, renewable energies, and energy transition, heritage and cultural transits, blue economy, digital transition and productive systems, demography, and aging, teacher training, among many others.

The University of Évora is guided by the strategic plan for the next decade, which recognizes that widening access to training is decisive for this to become a transversal reality. Included in the strategic plan was published the Decree-Law 27/2021, which "aims to modernize incentives for higher education institutions to cooperate with companies and the Public Administration, supporting the diversification of training provision and lifelong learning." Aligned with the government strategy, the University of Évora has been able to step up its efforts to strengthen lifelong learning, with strong participation from local and regional institutions and the student community. The University of Évora published in 2023 the Institutional Pedagogical Policy that reinforces the lifelong learning programs. Thus, in the field of pedagogical innovation, the University of Évora is strongly committed to the professional development of teachers in terms of curriculum design, pedagogical practices, and academic success.

The University offers short courses and postgraduate programmes in many different areas. Each school has a list that is accessible on the university webpage. These programs target people already working who want to increase their knowledge in specific areas. These capacity-building programs range from health to science and technology and nursing, amongst other areas. Some examples are Advanced Training in Veterinary Immunoallergology, Mediterranean Cultural Heritage and European Policies, Metacognitive training for depression, Assessment and therapeutic options for people with diabetic feet, Risk Management and Drug Safety, Academic Writing in English, Environment, Sustainability and Education, Science for humanity's coexistence with our heavily threatened blue-green, Health Unit Administration, Epidemiology, Gerontology and Health.

Through the Language Center of the School of Social Sciences, the University of Évora offers language courses throughout the academic year: English courses: Levels (A1; A2; B1, B2, C1 and Advanced Academic Writing Skills in English), French courses: Levels (A1 and A2), Italian Courses: Levels (A1 and A2), Spanish Courses: Levels (A1; A2 and B1), German Courses: Level (A1), Portuguese as a Foreign Language (PLE) courses: Levels (A1; A2 and B1) and Mandarin Course: Level (A1)

In general terms, the University of Évora's training offer incorporates all of the Sustainable Development Goals. Still, only a small number of degrees include words such as “sustainability,” “environment,” “human rights,” “blue planet,” and “health,” as can be seen below:

#### **Masters Programs**

- ✓ Management and Conservation of Natural Resources
- ✓ One Health: Human and Animal Public Health

#### **Doctoral programs**

- ✓ Agribusiness and Sustainability
- ✓ Sociology: Knowledge for Open and Inclusive Societies
- ✓ Political Theory, International Relations and Human Rights

#### **Postgraduate programmes**

- ✓ Environment, Sustainability and Education
- ✓ Science for humanity's coexistence with our heavily threatened blue-green planet
- ✓ Globalization and Development Challenges

The Preparatory Course for Entry to Higher Education stands out as an offer for under-represented groups, for students wishing to enter higher education through the special access program for the elderly (over 23), which allows people who, for various reasons, did not have access to higher education at the scholar age.

## **II. Fostering Lifelong Learning Principles at the UÉ**

#### **Services/offices**

The Office for Gender Equality and Inclusion (Gablqual) contributes to deconstructing gender stereotypes and promoting an inclusive and fair working, research, teaching, and learning environment. It also protects women's and men's rights, encourages cultures of parity, and promotes active policies to respect differences and promote equality.

The Student Integration and Support Division (DIAE) is responsible for welcoming, informing, and supporting all the students at the University of Évora. This helps facilitate their integration into the University and contributes to their general well-being and academic success.

DIAE assists students with learning support needs, provides psychological counseling, suggests study strategies, assists working students, welcomes and supports international students, organizes seminars to develop soft skills, manages volunteer projects, and monitors the implementation of the University of Évora's Student Participation Plan (PIPE-UÉ).

#### **Projects to support and facilitate**

To create the proper working conditions and promote the adoption of healthy lifestyles by the academic community, the Healthy University of the UÉ (USE) has been organizing numerous activities since 2016 aiming at infusing the concept of health among the university community from a broad, free and participatory perspective (SDG 3)

The University of Évora believes that the reconciliation of professional, family, and personal life is fundamental to raising levels of well-being, quality of life, and general satisfaction. The University's Work-life Balance Management System defines policies for reconciling professional,

family, and personal life related to strategic and operational activities. These activities are focused on professional support, personal development, and the continuous improvement of the organization (SDG 3 e 11)

The university also concerns itself with the mental health and well-being of its students. Currently, there is an Integrated Mental Health and Well-Being Service. The various existing structures support this service and provide numerous actions, considering the different levels of intervention (SDG 3 e 4).

The University of Évora is developing a programme to promote school success in higher education for students enrolling in the 1st year for the 1st time. This program favors sustainable investment in promoting school success and reducing dropout rates (SDG 4)

The University of Évora is Portugal's first higher education institution with a Comprehensive Student Participation Plan. Comprehensive student participation plans are a key element in achieving the objectives mentioned above, as they define a broad and coherent set of actions that affect all dimensions on which student participation can be viewed. They are also integrated plans that are coherently aligned with the objectives and strategies of universities, assuming the involvement of the entire academic community and contributing to the development of a culture of student participation.

In the application of the Plan for the Prevention of Risks of Corruption and Related Offenses (PPRCIC), the University of Évora guides its actions in accordance with the principles and ethical values of public administration, namely Public Administration, namely the principle of competence and responsibility: employees act in a responsible and competent, dedicated and critical manner, striving for professional development and thereby contributes to achieving SDG 16

### **Flexibility and accessibility**

Different partial attendance schemes, such as student-athletes, student workers, and firefighters, are flexible.

Regarding physical and communicational accessibility, the University of Évora has elevators, ramps, parking spaces for vehicles for people with reduced mobility, ramps, classrooms identified in Braille, and tactile signs for people who are blind.

The special regime for students with learning support provides some measures decided by a multidisciplinary team, with the contribution of the pedagogical council, course director, professors, students, staff, and services. The university's computer system allows students and professors to access the individual plan with support measures (SDGs 4 and 10).

## **IV. Focus on Specific Sustainability-Oriented Offerings at the UÉ**

The University of Évora offers a wide range of lifelong options, initiatives, and opportunities that encourage and support individuals in acquiring new knowledge, skills, and competencies throughout their lives, regardless of age or career stage. They encompass a wide range of educational activities, including formal courses, workshops, seminars, webinars, and open classes. Some are aimed at students, but others are also intended for teachers and technical and administrative staff. There are also activities open to the community. For example, in training teachers and other professions, there is a close link between supervisors supervising students during internships. Some of these activities are also attended by colleagues and students from other universities, especially when they take place online.

Several initiatives in various forms seek to meet the lifelong learning needs of a broad audience:

#### ***Micro-credential courses***

Micro-credentials are qualifications that certify learning outcomes resulting from short courses or modules and can, therefore, be acquired by citizens in various learning modalities: face-to-face, online, or blended. Micro-credentials are learning opportunities in the context of LLL. These new courses are an extremely flexible and inclusive form of learning, as they allow for acquiring competencies suited to different profiles and needs. In this way, these short-term qualifications will be useful, for example, for those who want to supplement their knowledge or for those who wish to retrain and are looking for a new position in the labor market. The philosophy behind this practice is that of lifelong learning, in which citizens can find new opportunities for growth through these qualifications. We have at the moment 24 micro-credentials; a few examples are:

- Assessment and therapeutic options for people with diabetic feet - SGD 3
- Exercise in aging and in people with central nervous system pathology - SGD 3
- Innovation and Industrial Property in Health SGDs 3 and 9
- Multifunctional Gardens in Urban Planning - SDG 11

The University of Évora, as an employer, offers certified professional training for teachers and non-teaching staff. Here are examples of recent training courses:

- Stress and conflict management - SDG 3
- Health and safety at work- SDG 3
- Equality and non-discrimination - SDGs 5 e 10
- Equality between men and women - SDGs 5 e 10.

#### ***Universidade Popular Túlio Espanca***

Aware of its social responsibility in the area in which it is located (the Alentejo), the University of Évora, through its *Universidade Popular Túlio Espanca*, aims to contribute to the scientific, cultural, and technical training of the citizens of the Alentejo, promoting their participation in training programs that induce lifelong learning styles that stimulate and reinforce the love and pleasure of learning. It is an instrument for achieving the Évora University mission, particularly regarding the production and socialization of knowledge in scientific areas related to the activity it proposes to develop and the provision of services to the community.

It prioritizes establishing protocols with institutions in the local and regional community to carry out its activities and involve the University of Évora, through its representative institutions, in implementing training activities promoted by civil society.

The entire resident population is the target audience for its scientific and pedagogical activities, and the methodology to be used is preferably non-formal training devices designed and implemented in conjunction with local institutions and assumed to be lifelong learning tools.

#### ***Other forms of LLL programmes/initiatives***

Through coordination between the university's departments, course directors, and research centers, and within the scope of the LLL courses, a range of scientific and cultural initiatives are held every year, aimed not only at university students but also open to the community such as open classes, conferences, colloquia, seminars, etc.

- ***Scientific Conference***

The University of Évora promotes scientific conferences that contribute to scientific dissemination. Their format allows students, teachers, and market professionals to discuss the same idea together, passing on experiences and knowledge to each other.

These events are great opportunities to keep up to date with the latest topics and news appearing in each area. They are also a popular means of publication, upgrading your CV and professional life, like NEXT GENERATION: YOU, 12th Regional Education Meeting "Learn in the Alentejo" and IIª Iberian Journey the Verb of Being in the Feminine.

- ***Cultural, social, and sports events***

These forms of education contribute to people learning throughout their lives in a more informal and relaxed way. It also helps foster group cohesion for those who organize these events and the participants. There are some examples of these activities: Science Festival'23, Science and Art Mission, European Researchers' Night 2022 with the theme "Science for All (SCIEVER) - Inclusion and Sustainability," and "What Europe? What we have, what we want, and what remains to be done" - reflections, plays, and art installations by students, faculty, and the community on how to build a multicultural, more equal, inclusive, and sustainable Europe, Conference: The Concert Accordion in Portugal - Perceptions and Expect

- ***Open classes***

Open classes are open for enrolment to a wide range of students without many restrictions or prerequisites, allowing students or other persons from various academic backgrounds to enroll. These classes are often designed to be more accessible, inclusive, and flexible regarding who can attend. They are associated with lifelong learning, where individuals continue to acquire new knowledge and skills throughout their lives. These classes may offer flexible scheduling, including evenings, to suit people who work during the day. This diversity can enrich the learning experience by bringing together a wide range of perspectives and experiences.

When held online, they allow more people to participate and are therefore more inclusive. They offer continuing education and professional development opportunities. Most of the time, they are conducted by a guest from outside the university who is an expert on curriculum program content, and participants receive a certificate of participation.

Health Challenge 2023—promoting healthy lifestyles in the communities and territories involved. Dynamization of a set of psychomotor activities and cultural routes around Évora by first-year students of the Masters in Psychomotricity from the University of Évora. Project P-IN develops the Intergenerational Intervention Program: Cri(iv)age, Health and Well-Being, University Sports.

- ***Workshops***

Among the numerous workshops every year, we would like to highlight an ongoing workshop on digital literacy. This workshop aims to teach staff so they can become more competent in using digital tools in their classes and create more innovative learning dynamics, fostering greater student involvement.

## **Conclusion**

The university holds significant historical importance and a foundation of academic excellence, which supports its lifelong learning (LLL) initiatives. Potential areas for further development include:

- Introducing a compulsory undergraduate course on Sustainability that addresses the three pillars: environmental, economic, and social aspects in alignment with the Sustainable Development Goals (SDGs).
- Providing training for various audiences on moral and sexual harassment, focusing on SDGs 5 and 10.
- Offering training on procedures for preventing corruption and related offenses, aligned with SDG 16.
- Implementing training in responsible consumption practices for electricity, water, and gas, as well as responsible vehicle usage, waste sorting, and collection, in line with SDGs 12 and 13.

## ALIGNMENT OF THE UNIVERSITY OF EXTREMADURA WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### 1. Introduction

#### 1.1 Overview of the University of Extremadura (UEx)

The UNIVERSITY OF EXTREMADURA was created in 1973 (Decree 991/1973, of 10th May 1973, BOE of 18th May 1973). Its history is closely linked to the community of Extremadura. Initially, it comprised the Faculty of Sciences of Badajoz, the University College of Cáceres, the University Schools of EGB of Cáceres and Badajoz, and the School of Agricultural Engineering of Badajoz. Since then, the UEx has increased its number of students, degrees, and centers to four areas: the campus of Badajoz, the campus of Cáceres, the University Centre of Mérida, and the University Centre of Plasencia.

More than 24,000 undergraduate and postgraduate students study at the UEx, and another 8,000 take doctoral courses, their degrees, or continuing education courses. There are 1,500 lecturers and more than 800 administrative, technical, and service staff. The Rector is Mr. Pedro M. Fernández Salguero, and the university's government is organized through different collegiate bodies, such as the Senate and the Governing Council, and unipersonal bodies, such as the Vice-rectorships, Management, and General Secretariat.

#### 1.2 National Framework of Qualifications (NFQ)

UEx's educational programs are structured in alignment with Spain's National Framework of Qualifications (Marco Español de Cualificaciones, MECU), which is consistent with the broader European Qualifications Framework (EQF). This framework ensures that the qualifications awarded by UEx are recognized throughout Europe, allowing for mobility, academic progression, and employment opportunities for students. The NFQ emphasizes competency-based learning outcomes, equipping students with the skills and knowledge necessary for their professional careers while promoting lifelong learning.

Under this framework, UEx offers a wide range of undergraduate and doctoral qualifications, including specialized postgraduate programs and professional certifications that enhance continuous learning.

### I. Aligning the UEx with the SDGs: A holistic approach

#### Educational Offerings at UEx

The University of Extremadura offers diverse academic programs across multiple disciplines, catering to a wide range of student interests and societal needs. With over 80 undergraduate degrees, 60 master's degrees, and 40 doctoral programs, UEx provides students with comprehensive educational pathways aligned with modern workforce demands. Additionally, UEx offers specialized diplomas, continuing education courses, and professional certifications that target both traditional students and lifelong learners.

### Faculties and Offices at UEx

UEx is organized into several faculties, each offering specialized education and research opportunities. These faculties include:

- Centro Universitario de Mérida
- Centro Universitario de Plasencia
- Escuela de Ingenierías Agrarias
- Escuela de Ingenierías Industriales
- Escuela Politécnica
- Escuela Internacional de Doctorado
- Facultad de Enfermería y Terapia Ocupacional
- Facultad de Ciencias de la Documentación y la Comunicación
- Facultad de Ciencias
- Facultad de Ciencias Económicas y Empresariales
- Facultad de Educación y Psicología
- Facultad de Empresas, Finanzas y Turismo
- Facultad de Filosofía y Letras
- Facultad de Formación del Profesorado
- Facultad de Medicina y Ciencias de la Salud
- Facultad de Ciencias del Deporte
- Facultad de Derecho
- Facultad de Veterinaria
- Centro Universitario Santa Ana
- Centro de Cirugía de Mínima Invasión Jesús Usón

Each of these faculties plays a vital role in promoting interdisciplinary education and research that addresses global challenges, including sustainability, economic development, and social innovation. UEx's faculty members are also involved in research projects that contribute to the university's sustainability efforts.

Moreover, various specialized offices engage with different aspects of societal and environmental responsibility:

- University Office for Cooperation and Solidarity Action
- Mediation Office
- Employment Guidance Office
- European Projects Office
- University Social Responsibility Office
- Healthy University Office
- Equality Office
- University Environment Office
- Transparency and Open Data Office

### Sustainability-Focused Programs

In recent years, UEx has made significant strides in aligning its educational offerings with global sustainability SDGs. The university offers several degree programs and courses that focus on sustainability and environmental issues, including:

- 1 Environmental Sciences
- 2 Renewable Energy and Energy Efficiency

- 3 Sustainable Agricultural Engineering
- 4 Sustainability Management in Industry

These programs are designed to equip students with the knowledge and skills to tackle environmental challenges and contribute to locally and globally sustainable development. Additionally, UEx integrates sustainability principles into other courses, ensuring that students from different fields understand sustainability and its importance in their future professions.

## II. Fostering Lifelong Learning Principles at the UEx

### Lifelong Learning Principles at the University of Extremadura (UEx)

Lifelong learning (LLL) refers to the ongoing, voluntary, and self-motivated pursuit of knowledge, skills, and competencies for personal or professional development. In today's rapidly changing world, lifelong learning has become essential for individuals to remain adaptable, maintain employability, and foster personal growth. The University of Extremadura (UEx) is dedicated to promoting lifelong learning through various programs and initiatives that provide access to continuous education for all, regardless of age or career stage.

### Integration of Lifelong Learning at UEx

UEx actively fosters an environment of lifelong learning by offering a wide range of educational opportunities that cater to diverse learners, including traditional students, working professionals, and adult learners seeking to upskill or reskill. The university's commitment to lifelong learning is evident in the following areas:

- ✓ **Continuing Education Programs:** UEx offers a variety of continuing education courses, diplomas, and certification programs tailored to professionals and non-traditional learners. These programs cover various disciplines, from **renewable energy management** to **healthcare, business administration, and digital technologies**. These courses are designed to be flexible and meet the needs of individuals who wish to improve their skills or advance in their careers.
- ✓ **Professional Development:** UEx provides ongoing training and professional development programs for individuals already engaged in the workforce. These programs are often designed in collaboration with local industries and professional associations, ensuring that the skills taught are relevant to the current demands of the job market. This is especially important for professionals in the rapidly evolving technology, education, and healthcare sectors.
- ✓ **Postgraduate and Specialized Programs:** UEx offers a wide selection of postgraduate programs, including master's degrees and doctoral programs, that allow students to continue their academic journey after completing their undergraduate studies. Many of these interdisciplinary programs focus on innovation and sustainability, ensuring graduates are well-prepared to address modern challenges. Postgraduate students can specialize in **sustainable development, environmental science, or digital transformation**.

### Accessibility and Flexibility in Learning

One key aspect of lifelong learning is the ability to access education at any stage of life. UEx has embraced this principle by offering flexible learning formats accommodating diverse learners.

- **Online and Blended Learning Options:** To make education more accessible to working professionals and individuals with time constraints, UEx offers a variety of online and blended learning courses. These formats allow students to balance their studies with personal and professional commitments. The online platform provides flexibility regarding when and where students can learn, making education more inclusive for those who cannot attend traditional on-campus classes.
- **Part-Time and Evening Courses:** UEx recognizes that many adult learners cannot commit to full-time study. To accommodate their needs, the university offers part-time degree programs and evening courses, allowing individuals to pursue higher education while continuing to work or manage family responsibilities.
- **Lifelong Learning for Seniors:** UEx also offers specialized programs for senior citizens, providing opportunities for personal development, social engagement, and intellectual enrichment. These programs contribute to social inclusion by allowing older adults to continue learning and stay active within the academic community.

### 3.3 Collaboration with External Organizations

UEx has established numerous collaborations with external organizations, including industries, government bodies, and other academic institutions, to support lifelong learning. These partnerships provide valuable professional training, research, and skills development opportunities.

- **Industry Partnerships for Upskilling and Reskilling:** UEx works closely with local and national industries to create programs focusing on upskilling and reskilling workers. For example, the university offers training in **renewable energy, technology management, and sustainability**, which are in high demand in today's labor market. These programs are often tailored to meet the specific needs of industry partners, ensuring that the curriculum is relevant and immediately applicable in the workplace.
- **Collaboration with Public Institutions:** UEx partners with local government bodies and NGOs to promote education as a means of regional development. The university plays a role in community outreach programs aimed at promoting lifelong learning in marginalized or underserved communities. These initiatives contribute to the social and economic development of Extremadura by empowering individuals with the knowledge and skills needed to improve their livelihoods.
- **Participation in European Lifelong Learning Networks:** UEx participates in several European networks and programs promoting adult education and professional development as part of its commitment to lifelong learning. Through initiatives like Erasmus+, UEx facilitates international exchanges and collaborative projects that encourage cross-border learning and sharing best practices in education.

### Supporting Research and Innovation in Lifelong Learning

UEx is not only committed to offering lifelong learning opportunities but also to advancing research in this field. The university's researchers actively study innovative educational methods and technologies that support continuous learning. Areas of focus include:

- **Digital Learning Technologies:** UEx is exploring using digital tools, such as learning management systems (LMS), e-learning platforms, and mobile apps, to enhance the accessibility and effectiveness of lifelong learning programs. These technologies enable personalized learning experiences and allow for more flexible, on-demand education.

- **Inclusive Education and Social Equity:** Research at UEx also addresses how lifelong learning can contribute to social equity. This includes studying how educational opportunities can be accessible to disadvantaged groups, including low-income individuals, people with disabilities, and those living in rural areas. By promoting inclusive education, UEx helps reduce social inequalities and promotes equal opportunities for all.

### III. Focus on Specific Sustainability-Oriented Offerings at UEx

#### Sustainability Initiatives at UEx

The University of Extremadura (UEx) is committed to embedding sustainability into its campus operations, educational programs, and research efforts. Recognizing the importance of sustainability in the face of global environmental challenges, UEx has taken concrete steps to ensure that its academic and operational practices align with the principles of sustainable development. These initiatives include:

- **Energy Efficiency Measures:** UEx has implemented energy-saving technologies and practices across its campuses. These include using energy-efficient lighting systems and heating and cooling solutions and promoting using renewable energy sources such as solar panels installed on university buildings.
- **Sustainable Water and Waste Management:** The university promotes responsible water usage and has adopted waste reduction practices, including recycling programs and sustainable waste disposal methods. UEx also supports the use of sustainable resources in its procurement processes.
- **Green Transportation:** UEx encourages students and staff to adopt eco-friendly transportation options. This includes providing bike-friendly infrastructure, promoting car-pooling, and offering electric vehicle charging stations on campus.

#### Alignment with the United Nations Sustainable Development SDGs (SDGs)

The University of Extremadura has aligned itself with the United Nations' 2030 Agenda for Sustainable Development, mainly focusing on several key Sustainable Development SDGs (SDGs) central to its mission. Notable areas of alignment include:

- **SDG 4: Quality Education**

UEx is critical to ensuring inclusive, equitable, and quality education. The university integrates sustainability education across its curricula and promotes continuous professional development in environmental fields.

- **SDG 13: Climate Action**

UEx is actively engaged in climate change research and mitigation strategies. The university is involved in projects to reduce carbon emissions, foster environmental conservation, and develop innovative approaches to combat climate change through interdisciplinary research.

- **SDG 7: Affordable and Clean Energy**

Through its programs related to renewable energy and energy efficiency, UEx contributes to developing clean energy solutions. The university supports research in solar, wind, and other renewable energy sources, helping to advance sustainable energy practices.

## Sustainable Campus and Curriculum

UEx strives to incorporate sustainability into its physical infrastructure and academic offerings, ensuring students and staff are exposed to sustainable practices and principles in their everyday campus life.

- **Eco-Friendly Campus Infrastructure:**

The university has embraced green building standards, aiming to reduce the environmental impact of its campus facilities. Recent renovations and new constructions prioritize energy efficiency, natural lighting, and sustainable materials.

- **Curricular Integration of Sustainability:**

UEx offers sustainability-focused degree programs, such as **Environmental Sciences** and **Sustainable Agricultural Engineering**, directly addressing pressing environmental issues. Additionally, sustainability topics are embedded across various other programs, ensuring that students from diverse fields—from business and law to engineering and the humanities—understand how sustainability intersects with their disciplines.

- **Research Centers and Projects:**

UEx is home to several research centers dedicated to sustainability-related issues. Notable research includes projects on sustainable agriculture, climate change adaptation, biodiversity conservation, and renewable energy innovation. These projects contribute to global sustainability efforts and engage students and faculty in hands-on research that supports local and regional sustainability SDGs.

## Student and Faculty Engagement in Sustainability

UEx encourages active participation from both students and faculty in its sustainability efforts, fostering a culture of environmental responsibility and innovation.

**Student-Led Sustainability Initiatives:** Students at UEx are involved in various sustainability-focused clubs and organizations, such as the **Green University Network**, which organizes awareness campaigns, workshops, and sustainability projects. These initiatives empower students to take a hands-on approach to environmental issues on campus and in their communities.

**Faculty Research and Sustainability Leadership:** UEx faculty members contribute to sustainability through their research, teaching, and involvement in public policy initiatives. Many professors lead sustainability-related projects, participate in international conferences, and collaborate with government and private-sector stakeholders to advance sustainability research.

UEx also partners with local businesses and government institutions to promote sustainability through **industry collaborations** and **public-private partnerships**. These partnerships allow the university to lead in promoting sustainable practices within the region.

## 4. Lifelong Learning (LLL) Courses and sustainability.

Lifelong learning (LLL) is essential for promoting continuous skill development and supporting sustainable development in a fast-evolving world. The University of Extremadura's LLL courses span various disciplines, offering both students and professionals opportunities to advance their education and contribute to societal progress. These courses align with several United Nations Sustainable Development SDGs (SDGs), particularly SDG 4 (Quality Education), SDG 8 (Decent

Work and Economic Growth), and SDG 13 (Climate Action). This report examines how some of these LLL courses contribute to sustainability and the SDGs.

### Overview of Lifelong Learning Courses

The University of Extremadura offers a wide range of courses to enhance professional competencies and personal development. The programs range from language learning to specialized certifications, each designed to provide learners with relevant skills for today's global job market.

The following are examples of the LLL courses offered at the university:

- **“Curso de inglés (nivel pre-intermedio)”** (Course of English, Pre-Intermediate Level)
- **“Lengua inglesa (Nivel preintermedio)”** (English Language, Pre-Intermediate Level)
- **“DISLEXIA Y DISGRAFÍA: Modelo teórico, evaluación e intervención”** (Dyslexia and Dysgraphia: Theoretical Model, Evaluation, and Intervention)
- **“Nuevas tecnologías aplicadas a la intervención psicoeducativa”** (New Technologies Applied to Psychoeducational Intervention)

### The Role of LLL Courses in Supporting Sustainability

These courses provide valuable skills and certifications that support personal growth and professional advancement and align with several United Nations Sustainable Development SDGs (SDGs).

1. **SDG 4: Quality Education**
  - **Objective:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
  - **LLL Contribution:** The courses offered by the University of Extremadura, such as **“Lengua inglesa (Nivel preintermedio)”**, enhance language proficiency, which is a critical skill for global communication and learning. This aligns with SDG 4 by making education more accessible and helping individuals engage in international opportunities. Similarly, **“DISLEXIA Y DISGRAFÍA: Modelo teórico, evaluación e intervención”** helps educators and professionals understand learning disorders, promoting inclusive education.
2. **SDG 8: Decent Work and Economic Growth**
  - **Objective:** Promote sustained, inclusive, sustainable economic growth, full and productive employment, and decent work.
  - **LLL Contribution:** Courses focusing on professional skill development directly contribute to employability and workforce readiness. For example, **“Nuevas tecnologías aplicadas a la intervención psicoeducativa”** enhances professionals' knowledge of integrating technology into educational and psychological interventions. By updating skills related to modern technology, these courses help professionals stay competitive in the labor market, fostering sustainable economic growth. Language courses like **“Curso de inglés (nivel pre-intermedio)”** also open up job opportunities in international settings, contributing to more inclusive and productive employment.
3. **SDG 13: Climate Action**
  - **Objective:** Take urgent action to combat climate change and its impacts.
  - **LLL Contribution:** While none of the listed courses explicitly focus on climate action, the university can develop LLL courses focusing on sustainability and environmental respon-

sibility. Courses in renewable energy, sustainable agriculture, or climate policy could directly contribute to SDG 13. Integrating sustainability modules into courses like “Nuevas tecnologías aplicadas a la intervención psicoeducativa” could also help professionals consider the environmental impact of their practices, promoting more sustainable use of technology.

### Enhancing the Link Between LLL and Sustainability

1. **Incorporating Sustainability into Existing Courses:** By integrating sustainability principles into courses such as “Nuevas tecnologías aplicadas a la intervención psicoeducativa,” the University of Extremadura could ensure that learners understand the broader implications of their skills. For instance, students could explore how technology can be leveraged to create eco-friendly learning environments or reduce educational institutions' ecological footprint.
2. **Developing New Sustainability-Specific Courses:** While current courses offer valuable professional development, sustainability-focused content has growth potential. Creating new LLL courses related to green technologies, renewable energy, and sustainable business practices would attract students interested in contributing to the global sustainability movement and directly supporting SDG 13.
3. **Strengthening Interdisciplinary Learning:** Sustainability is an interdisciplinary issue, and fostering faculty collaboration could create innovative courses. For example, courses that combine environmental science, engineering, and social sciences could provide comprehensive training on sustainability challenges and solutions.

### University Offices Supporting Sustainability and SDGs

In addition to its Lifelong Learning programs, the University of Extremadura supports sustainability and the SDGs through various specialized offices that engage with different aspects of societal and environmental responsibility. These offices play a pivotal role in integrating sustainability into the university's overall mission:

- **University Office for Cooperation and Solidarity Action:** This office promotes social solidarity and international cooperation, often aligning with SDG 17 (Partnerships for the SDGs). It fosters collaborations that support global sustainability efforts.
- **Mediation Office:** Focused on conflict resolution and dialogue, this office contributes to creating peaceful communities, aligning with SDG 16 (Peace, Justice, and Strong Institutions).
- **Employment Guidance Office:** By helping students and graduates find employment, this office supports SDG 8 (Decent Work and Economic Growth), ensuring that individuals can access productive and sustainable employment opportunities.
- **European Projects Office:** This office engages with European Union-funded sustainability projects, contributing to innovation and sustainable development in energy, agriculture, and digitalization.
- **University Social Responsibility Office:** Focused on embedding ethical and responsible behavior in the university's activities, this office contributes to various SDGs, particularly SDG 12 (Responsible Consumption and Production) and SDG 11 (Sustainable Cities and Communities).
- **Healthy University Office:** By promoting physical and mental well-being, this office supports SDG 3 (Good Health and Well-being), ensuring the university community maintains a healthy and sustainable lifestyle.

- **Equality Office:** Dedicated to gender equality and reducing inequalities, this office aligns with SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities), ensuring equal opportunities for all.
- **University Environment Office:** This office plays a central role in environmental sustainability. It works on initiatives that reduce the university's ecological footprint, contributing to SDG 13 (Climate Action) and SDG 15 (Life on Land).
- **Transparency and Open Data Office:** This office ensures the transparency of the university's operations and promotes access to open data, aligning with SDG 16 (Peace, Justice, and Strong Institutions) by fostering accountability and openness.

## The University for Seniors

### Overview of the University for Seniors

The University for Seniors (Universidad de Mayores) in Extremadura is a program designed to support and engage older adults in the region. It originated twenty-six years ago to address the needs of this demographic, promoting social inclusion, active aging, and lifelong learning.

The government of Extremadura initiated the program to provide resources and opportunities for older individuals, recognizing their contributions to society and the importance of their well-being. The program is typically subsidized by regional and national government funds, aiming to make activities accessible to older adults without financial burden.

The University for Seniors at the University of Extremadura is an educational initiative for older adults, typically targeting individuals aged 55 and above. Established to promote lifelong learning, the program aims to enhance the quality of life for seniors by providing them with opportunities for personal development, social engagement, and community involvement.

The University for Seniors currently has approximately 3,500 students distributed across various locations of the seniors' program, including Almendralejo, Badajoz, Cáceres, Don Benito, Mérida, Plasencia, Villanueva, and Zafra.

### Key Characteristics

- **Inclusivity:** The University for Seniors prioritizes inclusivity, ensuring that all participants, regardless of their background or prior educational experience, feel welcome and valued.
- **Interdisciplinary Approach:** The courses cover various subjects, from humanities and social sciences to technology and health, catering to diverse interests and fostering a holistic learning experience.
- **Flexible Learning:** Classes are designed to accommodate older adults' varying schedules and commitments, often offering flexible timings and formats (in-person and online). The University for Seniors offered online courses during the 2020-2021 academic year due to COVID-19, facilitating students' connection and helping to mitigate the isolation resulting from the measures adopted by the Spanish government to address the widespread contagion among a high-risk population, specifically older adults.

### 5.3. Activities and Courses

- **Academic Courses:** The program includes various subjects, such as history, literature, art, psychology, and environmental studies. These courses are taught by experienced educators who adapt their teaching styles to suit the needs of older learners.

- Workshops on Health and Wellness: Recognizing the importance of physical and mental health, the university offers workshops focused on nutrition, exercise, and mindfulness practices.
- Sustainability Education: Courses on sustainability teach participants about environmental issues and encourage practices that contribute to a more sustainable lifestyle. Activities may include gardening, recycling, and discussions on renewable energy.
- Digital Literacy Programs: These courses aim to equip older adults with essential digital skills, helping them navigate technology and connect with family and friends through social media and online platforms.
- Cultural and Recreational Activities: The program features various cultural activities, such as art classes, music, theater, and excursions to museums and historical sites, allowing participants to explore their creative sides and engage with cultural heritage.
- Intergenerational Projects: The university encourages collaboration between older and younger generations through shared activities, fostering mutual understanding and enriching the educational experience.

Please refer to the following link for further information regarding the subjects and activities.

[https://programamayores.unex.es/informacion-academica/programa\\_general/](https://programamayores.unex.es/informacion-academica/programa_general/)

### Community Involvement

The University for Seniors also emphasizes community engagement by collaborating with local organizations and providing opportunities for volunteer work. This approach enhances learning and fosters a sense of purpose and connection within the community. Among other organizations, the University for Seniors collaborates with the Association Against Cancer, which focuses on providing support and resources for cancer patients and raising awareness about cancer prevention, and the Food Bank, which works to alleviate hunger by distributing food to those in need.

### Conclusion

To conclude, the University of Extremadura (UEX) has made significant progress in aligning its practices with sustainability and lifelong learning principles. Through a range of innovative programs, research initiatives, and partnerships, UEX demonstrates its commitment to both environmental stewardship and the continuous education of its students and the broader community.

However, challenges still need to be addressed, particularly regarding resource allocation, stakeholder engagement, and the scalability of lifelong learning programs. By leveraging its strengths and pursuing new opportunities, such as expanding online learning platforms, fostering interdisciplinary collaboration, and strengthening public-private partnerships, UEX can continue to enhance its role as a leader in sustainability and lifelong learning.

Ultimately, UEX's efforts in these areas contribute to the well-being of its students and the regional community and support global SDGs for sustainable development and lifelong education. With continued dedication and strategic investment, the university is well-positioned to play a key role in shaping a sustainable and educated future.

## Challenges and Opportunities

While the University of Extremadura (UEx) has made significant progress in aligning with sustainability and lifelong learning principles, various challenges must be addressed to realize these SDGs fully. At the same time, numerous growth opportunities exist that can enhance the university's role as a leader in sustainable education and lifelong learning.

### Challenges in Implementing Sustainability and Lifelong Learning

- **Funding and Resource Allocation:** One of the primary challenges UEx faces in advancing sustainability initiatives and expanding lifelong learning opportunities is the availability of financial resources. Sustainable infrastructure, research, and educational programs often require significant technological, equipment, and human capital investments. Similarly, creating flexible lifelong learning programs, such as online courses and continuing education options, requires developing and maintaining digital platforms and specialized curricula. Securing long-term funding, whether through government support, private partnerships, or grants, is essential for the continued expansion of these initiatives.
- **Engaging Stakeholders:** Achieving complete alignment with sustainability and lifelong learning requires the active engagement of all university stakeholders, including faculty, students, administrative staff, and external partners. However, ensuring broad participation and commitment can be a challenge. For instance, some faculty members may need support integrating sustainability topics into their courses or adapting to new pedagogical approaches catering to lifelong learners. Additionally, gaining buy-in from industry partners for continuous collaboration on lifelong learning initiatives can be complex and time-consuming.
- **Scalability of Lifelong Learning Programs:** While UEx has made strides in offering lifelong learning opportunities, scaling these programs to meet the needs of a wider audience, both locally and globally, presents challenges. Online education platforms, for instance, must accommodate large numbers of learners without sacrificing quality. Moreover, creating personalized learning pathways that cater to different skill levels, career stages, and professional fields requires significant investment in technology and instructional design.
- **Sustainability in the Curriculum Across Disciplines:** Although UEx offers several sustainability-focused programs, integrating sustainability principles across all disciplines remains challenging. Embedding sustainability in courses ranging from business to the humanities requires a cross-disciplinary approach that may be difficult to implement in traditional academic structures. Some faculties may lack the necessary resources or expertise to incorporate sustainability into their curricula, limiting the reach of these important topics.

### Opportunities for Growth:

- **Strengthening Public-Private Partnerships:** UEx has the opportunity to deepen its collaboration with local industries, government agencies, and international organizations. Strengthening these partnerships can provide additional funding, resources, and expertise for both sustainability and lifelong learning initiatives. For example, partnering with renewable energy companies could result in hands-on training programs for students. At the same time, government support for regional development could help expand lifelong learning programs aimed at upskilling the local workforce.
- **Expanding Online and Digital Learning Platforms:** The growing demand for flexible, accessible learning options presents UEx with the opportunity to expand its online and

blended learning offerings. By investing in digital learning technologies, the university can reach a global audience of lifelong learners while maintaining the quality of instruction. This can include creating more MOOCs (Massive Open Online Courses) and expanding its e-learning platforms to offer micro-credentials, certificates, and professional development courses. These innovations will make it easier for learners to access education at any stage of life.

- **Interdisciplinary Research and Education in Sustainability:** There is a growing need for interdisciplinary research that addresses complex global challenges related to sustainability, such as climate change, resource management, and biodiversity conservation. UEx can enhance its role as a research leader by fostering faculty collaboration and creating interdisciplinary programs focusing on these areas. For example, students from the Faculty of Engineering could collaborate with those in the Faculty of Economics to develop solutions for sustainable industry practices, or the Faculty of Law could explore legal frameworks that support environmental conservation efforts.
- **Leadership in Regional and Global Sustainability Initiatives:** UEx is well-positioned to lead regional and global sustainability initiatives. By actively participating in European and international networks focused on sustainability and lifelong learning, the university can contribute to shaping policies and best practices. For example, UEx could lead in sustainability-focused consortia or contribute to international discussions on educational reforms to promote sustainable development SDGs (SDGs). This would not only enhance the university's reputation but also create more opportunities for its students and faculty to engage in meaningful sustainability efforts.
- **Promoting Lifelong Learning for All:** UEx can further democratize education by promoting lifelong learning opportunities that cater to diverse populations, including underrepresented groups, rural communities, and individuals with limited access to formal education. By expanding outreach programs, offering scholarships, and creating targeted educational campaigns, UEx can ensure that lifelong learning is accessible to everyone, regardless of socioeconomic background. This would also enhance social inclusion and promote the regional development of Extremadura.
- **Innovation in Lifelong Learning Pedagogy:** The continuous development of innovative teaching methods, such as competency-based education and personalized learning pathways, presents an exciting opportunity for UEx to lead lifelong learning. By leveraging learning analytics, adaptive learning technologies, and artificial intelligence, the university can create individualized learning experiences that cater to each student's unique needs. This will help enhance the effectiveness of lifelong learning programs and ensure that learners gain practical, relevant skills directly applicable to their careers.

## ALIGNMENT OF *OTTO VON GUERICKE* UNIVERSITY MAGDEBURG WITH SUSTAINABILITY AND THE PRINCIPLES OF LLL

### Introduction

This section explores how the Otto-von-Guericke-University of Magdeburg (OVGU) aligns its faculties and study programs with lifelong learning (LLL) principles and sustainability. We will analyze the university's faculty structure, focus on specific sustainability-oriented offerings, and consider potential areas for further development.

#### I. Aligning the OVGU with the SDGs: A holistic approach

Otto von Guericke University Magdeburg has a distinctive profile. It aims to create a lean and sharply defined structure, focusing on expertise in the traditional areas of engineering, the natural sciences, and medicine. It also views economics, management, social sciences, and humanities as essential disciplines for a modern university in the information age. The University sees its main task as raising the standard of education and scholarship through teaching and research.

OVGU has nine faculties: mechanical engineering, process and systems engineering, electrical engineering and information technology, computer science, mathematics, natural sciences, medicine, human sciences, and economics.

Bachelor's and Master's degree programs are offered. The human medicine degree program ends with a state examination. There is also the option of obtaining a BA degree as part of a dual degree program (work + study). The teaching degree program is also divided into BA and MA. There are also "special study programs," such as English and study programs with double or joint degrees.

The offers in the LLL area include the "lateral entry programs" for teacher training, guest auditor programs, and the "Studying from 50" program, part-time continuing education offers, internal continuing education offers for university members, and structured offers in further academic qualifications (especially doctoral studies).

The Center for Academic Continuing Education, the Faculty of Human Sciences, and the Otto von Guericke Business School are responsible for the part-time and post-employment programs. The Center for Academic Continuing Education coordinates or supports and offers continuing education programs. The Faculty of Human Sciences and the Business School (partly in cooperation with the Center for Scientific Continuing Education) offer their own academic continuing education programs.

The Sustainability Office plays an important role in the topic of sustainability. It is the central point of contact for sustainability at Otto von Guericke University. It is responsible for implementing the sustainability strategy, networking active persons and activities, and reporting and providing information about sustainability in the different areas of the OVGU. In addition, the Sustainability Office advises individuals, committees, etc., on aspects related to sustainability (e.g., project applications, changes to processes).

#### University Faculty Structure and Alignment to SDGs



#### **Mechanical Engineering: Institutes**

- Institute for Materials, Technologies and Mechanics (IWTM)
- Institute for Engineering of Products and Systems (IEPS)

#### **Process and systems engineering: Institutes**

- Institute of Process Engineering (IVT)
- Institute of Instrumental & Environmental Technology (IAUT)
- Institute of Fluid Dynamics and Thermodynamics (ISUT)
- Institute of Chemistry (ICH)

#### **Electrical engineering and information technology: Institutes**

- Institute of Automation Technology (IFAT)
- Institute of Electrical Systems (IESY)
- Institute of Information and Communication Technology (IIKT)
- Institute of Medical Technology (IMT)
- Institute of Micro and Sensor Systems (IMOS)

#### **Computer science: Institutes**

- Institute of Technical and Business Information Systems (ITI)
- Institute of Intelligent Cooperative Systems (IKS)
- Institute of Simulation and Graphics (ISG)

#### **Mathematics: Institutes**

- Institute of Algebra and Geometry (IAG)
- Institute of Analysis and Numerics (IAN)
- Institute of Mathematical Optimisation (IMO)
- Institute of Mathematical Stochastics IMST

#### **Natural Sciences: Institutes and Departments**

- Institute of Biology (IBIO)
- Institute of Physics (IfP)
- Institute of Psychology (IPSY)
  - o Department of Experimental Psychology
  - o Biological Psychology
  - o Clinical Developmental Psychology
  - o Department of Neuropsychology
  - o Methods I: Methods of Experimental and Neuroscientific Psychology
  - o Somatosensory and Body Lab
  - o Methods II: Evaluation and Diagnostics
  - o Environmental Psychology
  - o Personality and Social Psychology
  - o Work and Organizational Psychology

#### **Medicine: Institutes and Centers**

- Human Genetics (IHG)
- Clinical Chemistry and Pathobiochemistry (IKCP)
- Clinical Pharmacology (IKP)
- Medical Microbiology (IMMB)
- Molecular & Clinical Immunology (IMKI)

- Transfusion Medicine and Immunohaematology/Blood Bank (ITIB)
- Neuroradiology (INR)
- General Medicine (IALM)
- Anatomy (IANA)
- Biometrics and Medical Informatics (IBMI)
- Medical Psychology (IMP)
- Molecular Biology and Medical Chemistry (IMMC)
- Pharmacology and Medical Chemistry (IPT)
- Physiology (IPHY)
- Social Medicine & Health Economics (ISMG)
- Experimental Internal Medicine (IEIM)
- Cognitive Neurology & Dementia Research (IKND)
- Occupational Medicine (IAM)
- History, Ethics, and Theory of Medicine (GET)
- Centre of Pathology and Forensic Medicine
  - o Pathology (IPA)
  - o Neuropathology (INPA)
  - o Forensic Medicine (IRM)
- Centre for Biochemistry and Molecular Biology
  - o Biochemistry and Cell Biology (IBZ)
  - o Neurobiochemistry

#### Human sciences: Institutes and areas

- Institute I: Education, Vocation and Media
  - o Vocational Education and Human Resources Development
  - o Educational Science
- Institute II: Social Sciences
  - o Sociology
  - o Political Science
  - o History
- Institute III: Philology, Philosophy, Sports
  - o Anglophone Studies
  - o German Studies
  - o Philosophy
  - o Sports Science

#### Economics: Institutes

- Business Management
- Economics
- Law

Table 1 highlights the specific ways in which each faculty incorporates the SDGs into its curriculum, demonstrating the commitment of OVGU to sustainable education.

*Table 1: Faculty Alignment with SDGs at the OVGU*

| Faculty                       | Aligned SDGs                                                                                      |
|-------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Mechanical Engineering</b> | SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production) |

|                                                          |                                                                                                              |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Process and Systems Engineering</b>                   | SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action) |
| <b>Electrical Engineering and Information Technology</b> | SDG 9 (Industry, Innovation, and Infrastructure), SDG 11 (Sustainable Cities and Communities)                |
| <b>Computer Science</b>                                  | SDG 9 (Industry, Innovation, and Infrastructure), SDG 11 (Sustainable Cities and Communities)                |
| <b>Mathematics</b>                                       | SDG 4 (Quality Education), SDG 9 (Industry, Innovation, and Infrastructure)                                  |
| <b>Natural Sciences</b>                                  | SDG 3 (Good Health and Well-being), SDG 13 (Climate Action), SDG 15 (Life on Land)                           |
| <b>Medicine</b>                                          | SDG 3 (Good Health and Well-being), SDG 4 (Quality Education)                                                |
| <b>Human Sciences</b>                                    | SDG 4 (Quality Education), SDG 10 (Reduced Inequality), SDG 11 (Sustainable Cities and Communities)          |
| <b>Economics</b>                                         | SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production)                     |

## LLL Programs

### Part-time courses

- Adult education (M.A., 4 semesters)
- Adult education certificate (1 semester)
- Project management and team development (M.A., 4 semesters)
- Project management certificate (1 semester)
- Supply chain design & collaboration certificate (1 semester)
- Otto-von-Guericke Business School
  - o Bachelor of Business Administration (B.A., 6 semesters)
  - o Master of Business Administration (Business Administration MBA, 4 semesters)
  - o Sports Management (M.A., 4 semesters)
  - o Business psychology (M.A., 4 semesters)

### Structured doctoral programs

- Economics (PhD, 10 semesters)
- Management (PhD, 10 semesters)
- Process Engineering (PhD, 6 semesters)

### Continuing education opportunities for further academic qualification (mainly accompanying the PhD)

- Teaching Development Program/Teaching Certificate "PAL"
- Otto-von-Guericke Graduate Academy
- Qualitative Educational and Social Research (Certificate, 4 semesters)
- Vocational training and personnel development (Certificate, 4 semesters)

### Programs for “lateral entrants” into teaching training

- Certificate course for lateral entrants into teacher training in mathematics
- Certificate course for lateral entrants into teacher training in physics
- Qualification courses for lateral entrants into teacher training with a bachelor's degree
- Certificate course for lateral entrants into teacher training in computer science

### **Study opportunities for older people and the interested public**

- “Studieren ab 50” (study program for the third age)
- Guest student program

The university's LLL programs align with several SDGs, particularly SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth). By offering a diverse range of programs, from undergraduate to doctoral levels, the university caters to the lifelong learning needs of individuals at various stages of their careers.

The part-time courses, such as adult education, project management, and supply chain management, provide opportunities for working professionals to upskill and reskill, contributing to SDG 8 by enhancing employability and economic growth. The structured doctoral programs in economics, management, and engineering contribute to SDG 9 (Industry, Innovation, and Infrastructure) by fostering research and innovation.

Additionally, the university's commitment to continuing education, through initiatives like the Teaching Development Program and the Otto-von-Guericke Graduate Academy, aligns with SDG 4 by improving the quality of education and enhancing the skills of educators. The university promotes lifelong learning and social inclusion by offering opportunities for older learners and the interested public.

### **II. Fostering Lifelong Learning Principles at the OVGU**

OVGU offers a variety of lifelong learning opportunities, such as part-time studies, continuing education programs, and online courses, to cater to the diverse needs of its learners.

### **III. Focus on Specific Sustainability-Oriented Offerings at OVGU**

Various areas explicitly deal with environmental and sustainability issues. This includes, among other things, research and teaching activities at the Professorship of Political Science with a focus on sustainable development (Prof. Dr. Michael Böcher), Environmental Psychology (Prof. Dr. Ellen Matthies), and Personality and Social Psychology (Prof. Dr. Florian G. Kaiser).

In addition, a transdisciplinary program, the Sustainability Certificate, plays a central role in establishing sustainability-related topics in the OVGU courses. The coordinator is Juliana Hilf. The program is assigned to the Department of Political Science and focuses on sustainable development.

The OVGU Magdeburg Sustainability Certificate is a transdisciplinary, cross-curricular study program for all properly enrolled OVGU students. The Chair of Political Science implements it with a Focus on Sustainable Development. It can be acquired by participating in several courses from different disciplines and is then attached to the diploma. It can serve as a profile in the study program and a professional qualification and aims at competence development in the sense of education for sustainable development.

Threats such as climate change, resource scarcity, and social injustice are our time's central and global challenges. How we face them defines the future of humanity, ecosystems, and wildlife. "Sustainability" has become a trendy word, yet it must be seen as a core element of transformation processes. The UN Sustainable Development SDGs guide our understanding of sustainability and include ecological, economic, and social strands.

Students are today's change agents and tomorrow's multipliers, for whom the OVGU Sustainability Certificate (NAO) was created. The NAO is a course of study in which complex topics of

(non-)sustainable development are dealt with critically and scientifically to help shape a future aligned with the mission statement.

In the field **of academic continuing education**, the H2HUB is an important project that organizes, supports, and offers courses on sustainability and energy in LLL.

The "Studying from 50" program does not explicitly focus on sustainability but offers lectures and project seminars on the topic in cooperation with colleagues from the research mentioned above areas (e.g., Prof. Dr. Florian G. Kaiser or Juliana Hilf, who is also active in the field of service learning).

## Conclusions

The University of Magdeburg offers a comprehensive range of lifelong learning (LLL) programs that are aligned with various Sustainable Development Goals (SDGs). The university demonstrates a strong commitment to sustainability, particularly in the areas of climate change, environmental science, and social justice. These LLL programs are designed to accommodate a diverse audience, including working professionals and retirees, to enhance their skills, knowledge, and career advancement opportunities. In addition, the university strongly emphasizes interdisciplinary research and collaboration, which fosters innovation and effectively addresses complex global challenges.

## CONCLUSIONS

The comparative analysis of lifelong learning and sustainability integration practices at the universities of the EU GREEN Alliance reveals a strong convergence toward more flexible, inclusive, and future-oriented educational models. All institutions examined have implemented programs and initiatives that underscore the importance of continuous learning, sustainable development, and adaptability to evolving labor market demands.

### Commonalities Identified in Aligning the EU GREEN Universities with the SDGs:

- All universities have integrated, to varying degrees, the principles of sustainable development into their curricula, offering specialized courses and promoting research in areas such as renewable energy, sustainable agriculture, and environmental protection.
- Universities collaborate with various partners, such as industries, non-governmental organizations, and other academic institutions, to facilitate knowledge transfer and promote innovation.
- All universities offer continuing professional development programs, enabling graduates and professionals to update their knowledge and skills throughout their lives.

As the table below illustrates (table 1), these institutions have integrated sustainability principles into their curricula, offered diverse lifelong learning programs, and fostered a culture of innovation and collaboration.

*Table 1: Comparative Analysis of EU GREEN Universities Aligning with the SDGs*

| University           | Sustainability Integration in Curriculum                                                                           | Specific Sustainability Programs                                                                                                                                                                                                                                                                            | Lifelong Learning Programs                                                             | Professional Development                                                                                 |
|----------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| University of Oradea | Integrated into various study programs in all of the three cycle degrees and also in postgraduate training courses | Focus on sustainability for master's degree in Environmental Protection (e.g., Environmental engineering and occupational safety, Agri-food safety and security, Sustainable valorization of forest resources), energy engineering (e.g., Renewable energies, Management of energy systems, Quality manage- | Postgraduate training & continuing professional development courses (online, 6 months) | Programs for teachers (educational management, special pedagogy), energy engineering (energy management) |

|                                                                 |                                                                                                       |                                                                                                                        |                                                                                  |                                                                                       |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                 |                                                                                                       | ment and consumer protection in the textile-leather sector)                                                            |                                                                                  |                                                                                       |
| <b>University of Gävle</b>                                      | Strong emphasis on sustainable development                                                            | Master's programs in Sustainability Science, Sustainable International Business                                        | Diverse LLL programs (online, hybrid, traditional)                               | Programs for teachers and other professionals                                         |
| <b>University of Parma</b>                                      | Focus on sustainable food systems, green architecture, environmental engineering                      | Programs like Global Food Law: Challenges and Innovation in Sustainability, Civil and Environmental Engineering        | Postgraduate master's, continuing education courses, advanced studies school     | Programs for teachers and other professionals, On-Foods Foundation                    |
| <b>University of Environmental and Life Sciences in Wrocław</b> | Strong focus on environmental protection, sustainable agriculture, renewable energy                   | Programs in Environmental Engineering, Biotechnology, Sustainable Agriculture                                          | Master's, doctoral, continuing education courses, workshops                      | Continuing education courses for diverse participants                                 |
| <b>University of Extremadura</b>                                | Integrated into various programs (e.g., Environmental Sciences, Sustainable Agricultural Engineering) | Specialized diplomas, continuing education courses, professional certifications                                        | Continuing education courses, diplomas, and certification programs               | Professional development programs for various sectors                                 |
| <b>Otto-von-Guericke University Magdeburg</b>                   | Integrated into various programs (engineering, natural sciences, social sciences)                     | Sustainability Certificate program, research in environmental psychology and sustainable development                   | Part-time courses, postgraduate programs, continuing education opportunities     | Professional development programs for teachers and other professionals                |
| <b>Atlantic Technological University (ATU)</b>                  | Focus on embedding sustainability across all disciplines                                              | Certificate in Green Enterprise Skills, B.Sc. in Sustainable Building Technology, M.Sc. in Circular Economy Leadership | Wide range of online, blended, and on-campus courses for various academic levels | Opportunities in areas like biopharma, Industry 4.0, and environmental sustainability |
| <b>University of Évora</b>                                      | Focuses on SDGs in five pro-                                                                          | Agribusiness & Sustainability                                                                                          | Diverse courses (short courses,                                                  | Short courses, workshops, and                                                         |

|  |                                                                                |                                                                        |                                                         |                                                      |
|--|--------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------|
|  | grams (e.g., Science & Technology, Social Science, Health & Human Development) | (Doctoral Degree), Ecological Restoration for Ecosystem Sustainability | workshops, micro-credentials) and post-graduate degrees | micro-credentials for professional skill development |
|--|--------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------|

#### Commonalities identified in aligning the EU GREEN Universities with the LLL principles:

- Universities offer various learning formats, including online, hybrid, and traditional, to accommodate students' diverse needs and lifestyles.
- All institutions strive to create inclusive learning environments, offering programs and services tailored to the needs of underrepresented groups.

As illustrated in Table 2, the EU Green Alliance universities are committed to providing flexible and inclusive learning environments.

*Table 2: Flexibility and Inclusivity in EU Green Universities*

| University                                               | Flexibility                                                        | Inclusivity                                                                           |
|----------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| University of Oradea                                     | Traditional, hybrid, and distance programs                         | Places reserved for minorities, programs in foreign languages                         |
| University of Gävle                                      | Online, hybrid, traditional, including distance learning options   | Programs in English, support for students with disabilities                           |
| University of Parma                                      | Online, hybrid, traditional, including distance learning options   | Center for Welcome and Inclusion supports underrepresented students                   |
| University of Environmental and Life Sciences in Wrocław | Online, hybrid, traditional, including distance learning options   | Programs in English, support for students from underrepresented groups                |
| University of Extremadura                                | Flexible formats, including online and part-time options           | Inclusive programs for diverse learners, including seniors                            |
| Otto-von-Guericke University Magdeburg                   | Flexible formats, including online and part-time options           | Inclusive programs for diverse learners, including older adults                       |
| Atlantic Technological University (ATU)                  | Online, blended, and on-campus courses                             | Supports part-time learners, offers peer-to-peer learning, provides recorded sessions |
| University of Évora                                      | Offers a variety of course formats: online, blended, and in-person | A broad range of programs across various disciplines caters to diverse interests.     |

#### Unique Strengths and Differentiators:

Each university within the EU Green Alliance offers unique strengths that contribute to the overall mission of promoting sustainability and lifelong learning (see Table 3).

Table 3. Unique Strengths and Differentiators of EU Green Alliance Universities

| University                                               | Unique Strengths                                                                                                                                                                                                                 |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| University of Oradea                                     | Focus on agriculture and socio-human sciences.                                                                                                                                                                                   |
| University of Gävle                                      | Accent on lifelong learning, flexibility                                                                                                                                                                                         |
| University of Parma                                      | Please focus on the food sector and its sustainability.                                                                                                                                                                          |
| University of Environmental and Life Sciences in Wrocław | Focus on environmental sciences and sustainable development.                                                                                                                                                                     |
| University of Extremadura                                | Focus on sustainability in various disciplines, including agriculture, engineering, and social sciences.                                                                                                                         |
| Otto-von-Guericke University Magdeburg                   | Focus on an interdisciplinary approach to sustainability with a robust research focus.                                                                                                                                           |
| Atlantic Technological University (ATU)                  | ATU encourages embedding sustainability across all programs. Focus on curriculum, campus management, community engagement, research, and culture.<br><br>N-TUTORR project supports embedding sustainability into the curriculum. |
| University of Évora                                      | Postgraduate programs align with SDGs (e.g., Agribusiness & Sustainability Doctoral Degree).                                                                                                                                     |

Each EU GREEN university offers unique strengths that contribute to the overall mission of promoting sustainability and lifelong learning:

- University of Oradea: While integrating sustainability across various faculties, the university stands out for its focus on agriculture and social sciences and the inclusion of sustainability principles in engineering programs.
- University of Gävle: This university emphasizes lifelong learning and flexibility by providing a wide range of study options (online, hybrid, traditional) to cater to diverse needs.
- University of Parma: Its focus on sustainable food systems and green architecture sets it apart.
- University of Environmental and Life Sciences in Wrocław: This university strongly emphasizes environmental protection and sustainable development, as reflected in its programs.
- University of Extremadura: Sustainability is integrated into various disciplines here and offers flexible lifelong learning programs.
- Otto-von-Guericke University Magdeburg: This university excels in its interdisciplinary approach to sustainability and focuses on professional development programs, particularly those geared towards educators.
- University of Évora: This university integrates the SDGs into five core programs (Science & Technology, Social Science, Health & Human Development) and offers postgraduate degrees and diverse short courses for professional development.

In conclusion, while each university has unique strengths, a common theme emerges: a commitment to creating a sustainable future through education and research. By combining their unique strengths, the universities from the EU GREEN Alliance are collectively driving innovation, promoting sustainable practices, and fostering a new generation of environmentally conscious and socially responsible citizens.

### **Potential areas for further exploration and collaboration among the EU GREEN alliance to achieve SDGs and foster LLL principles**

To further strengthen the impact of the EU GREEN Alliance, the universities can explore the following areas of collaboration:

#### **1. Curriculum Innovation and Interdisciplinary Approaches in LLL programs aligned to SDGs**

The alliance can ensure a consistent, high-quality educational experience across institutions by developing a shared framework for sustainability-focused courses and programs. Modular curriculum design can promote flexibility and efficiency, allowing for the adaptation of courses to specific regional and institutional contexts. Encouraging interdisciplinary collaboration in curriculum development can foster innovative solutions to complex sustainability challenges, equipping students with the skills and knowledge needed to address SDGs 4 (Quality Education), 12 (Responsible Consumption and Production), and 13 (Climate Action).

#### **2. Collaborative Research and Innovation about LLL programs aligned to SDGs**

Joint research projects can leverage the combined expertise of researchers from different institutions to address pressing global challenges such as climate change, renewable energy, and sustainable development. Establishing knowledge-sharing platforms can facilitate the exchange of research findings, methodologies, and best practices, accelerating scientific progress and innovation. Additionally, creating innovation hubs can foster collaboration between researchers, industry partners, and policymakers, developing practical solutions to sustainability challenges and contributing to SDGs 9 (Industry, Innovation, and Infrastructure) and 17 (Partnerships for the SDGs).

#### **3. Lifelong Learning programs aligned to SDGs and Professional Development**

The alliance can collaborate on developing and delivering joint lifelong learning programs, including formal education, professional development courses, and Massive Open Online Courses (MOOCs), to enhance the impact of these initiatives. Offering micro-credentials can validate specific skills and competencies related to sustainability, providing flexible and accessible pathways for professional development. Developing online learning platforms can improve access to a wide range of learning resources and opportunities, promote lifelong learning, and contribute to SDG 4 (Quality Education).

#### **4. Student and Staff Mobility and Collaboration**



Facilitating student and staff exchange programs can foster intercultural understanding, enhance global citizenship, and provide opportunities for collaborative research. Virtual exchange programs can connect students and staff from different institutions, promoting intercultural dialogue and knowledge sharing. Collaborating on the joint supervision of doctoral students and postdoctoral researchers can enhance the quality of research and foster international collaborations, contributing to SDG 17 (Partnerships for the SDGs).

By concentrating on some key areas—renewable energy, sustainable agriculture, pollution reduction, and biodiversity conservation—the EU GREEN Alliance can play an important role in advancing the Sustainable Development SDGs (SDGs). This concerted effort aims to enhance environmental protection, promote social equity, and stimulate economic growth, ultimately leading to a future that is both sustainable and equitable for all.

## TARGET AUDIENCE

The completed report is published for consultation by the general public.  
The third LLL Analysis Report, due in 2025, will analyze the lifelong learning programs carried out in the alliance universities to capture their development regarding the objectives assumed at the project level.