EEDA

EXPLORE ENERGY DIGITAL ACADEMY

MARCH 2025

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NEWSLETTER

IN THIS EDITION

FROM THE EDITOR

As the academic and professional energy landscape continues to evolve, so too does our commitment to strengthening the bonds between learning, practice, and innovation. This edition reflects not only a growing network of contributors and institutions, but also a shared momentum—a recognition that energy transition is not a solitary journey, but a collective challenge shaped by context, technology, and people.

Barriers to access, whether technical or systemic, remind us that educational tools must remain agile and inclusive. Whether in the classroom, in digital platforms, or through policy conversations, the ability to identify and remove these obstacles is central to meaningful learning.

Voices from across the region continue to enrich this dialogue. Through thoughtful analysis, experience-based perspectives, and firsthand testimonials, we're reminded of the human dimension behind institutional efforts. These stories elevate our understanding of how academic programs, leadership, and gender equity can drive change when aligned with purpose and action. They also emphasize that the most impactful initiatives are often those that amplify diverse voices and promote a sense of shared responsibility among stakeholders.

The work ahead remains ambitious. But with each collaboration, each shared insight, and each step forward in program development, we reaffirm our role in shaping a more resilient, inclusive, and sustainable energy future—one where education is both the starting point and the catalyst for impact. As we prepare for upcoming milestones, our collective vision continues to grow stronger, anchored in the belief that knowledge, when made accessible and applicable, is one of the most powerful tools we have to transform not only industries, but lives.

EEDA MEETING JUNE 09-13, 2025

On June 09-13, 2025, a physical EEDA meeting with colleagues from all the EU CBHE projects **EUSL-Energy, EUBBC-Digital, EU-BEGP, EDU-ABCM, EU-ZW and EU-AGM** will take place in Sweden. Outside teachers are invited to participate and learn about the large potentional EEDA carries with it for global educational collaboration.

Close to 50 educators are expected to join sessions related to best practices of how to create modules, courses, micro-credentials etc, as well as appropriate training sessions. Collaboration efforts on theoretical modules/courses as well as related to remote labs and challenges will be discussed. Potentials for common creation of EEDA-related funding opportunites is part of the agenda.

For more information, and/or to secure your place for this important meeting, please contact: Valentina.Zaccaria@mdu.se

Dr. José Ramiro Bolaños Rivera

GREAT THINGS EEDA HAS THE POTENTIAL TO DO FOR THE WORLD

by Dr. José Ramiro Bolaños Rivera - Academic Vice Chancellor - USPG-GT

EXPLORE Energy Digital Academy (EEDA) is an innovative initiative that seeks to transform access to education and training in the energy sector through digital platforms. In a world where energy transition and digitalization are advancing rapidly, EEDA has the potential to train highly skilled professionals to meet the global challenges of sustainability, energy efficiency and new technologies.

Digital education and its impact on energy education: One of EEDA's greatest contributions is its ability to democratize access to knowledge in renewable energy and digitization. According to the International Energy Agency (IEA, 2023), the demand for specialists in clean technologies and energy transition has grown by 30% in the last decade, but the supply of trained professionals remains limited. Digital education bridges this gap by offering globally accessible programs, eliminating geographic and economic barriers that hinder access to specialized training. In addition, EEDA combines innovation and international collaboration. The digitization of education connects experts from different countries to share best practices and solutions in energy efficiency, energy storage and smart grids. A European Commission study (2023) highlights that digital learning platforms increase knowledge retention by 60% and facilitate continuous training, key elements for a constantly evolving sector.

Global comparison of digital energy education: Digital energy and energy transition training varies significantly between regions around the world. Europe leads training in this sector due to government policies and funding in renewable energy, while Latin America and Africa face challenges in access to technology and educational funding.

REGION	Percentage of Professionals Trained in Digital Energy	Key Challenges	Opportunities
Europe	75%	Complex regulations, high innovation costs.	Access to advanced technology, public and private financing.
Africa	30%	Limited infrastructure, lack of investment in education.	Growth in renewable energies, access to digital programs.
Asia	50%	Inequality in access to digital education.	Expansion of clean technologies, investment in training.
Latin America	40%	Lack of specialized programs, unequal access to technology.	Potential in renewable energies, growth of online education.

The table compares the level of digital energy training in different regions according to data from the International Energy Agency IEA (2023) and UNESCO (2023)

Conclusion and future perspectives: Another crucial aspect of EEDA is its contribution to sustainability and the reduction of the renewable energy talent gap. The World Economic Forum (2023) notes that the training of clean energy specialists is critical to achieving net zero emissions goals. EEDA responds to this need with programs focused on renewable energy, energy efficiency and digital solutions, preparing the next generation of experts in a strategic field for the future. In conclusion, EEDA has the potential to make a significant impact by providing accessible digital education, promoting innovation in the energy sector and strengthening the training of professionals committed to the transition to a sustainable future. Its digital, global and specialized approach positions it as a key player in the transformation of the energy sector in the coming decades.

For full references, see page 12.

GENDER EQUITY IN FOCUS: A COLLABORATIVE ERASMUS+ EFFORT

Prof. Agatha da Silva presented during EDUDINE2025 Conference

EEDA Strengthens Global Collaboration on Gender Equity at EDUNINE 2025

At the EDUNINE 2025 Conference in Montevideo, Uruguay, Agatha DaSilva from UPB presented the research on Gender Equity, a collaborative effort uniting four Erasmus+ projects: **EU-BEGP**, **EUBBC-Digital**, **EDU-ABCM**, and **EU-ZW**.

This study, developed through EEDA's network of international cooperation, brings together insights from diverse institutions worldwide, emphasizing the importance of equity in education. By fostering collaboration across projects and regions, EEDA continues to drive innovation and inclusivity in higher education.

During the conference, the proposal garnered strong interest, igniting meaningful discussions and opening doors to new regional collaborations. The perspectives exchanged will play a crucial role in shaping more inclusive and sustainable educational strategies, creating equity for all learners, irrespective of gender.

Congratulations to Prof. Agatha da Silva and all partners for their valuable contributions to a more equitable academic landscape.

Learnify hint: Blocked pages

In Learnify it is possible to block access to a page if not all the previous pages have been finalized.

In some modules the teacher may want to force the learner to read all pages before having access to the certificate of completion. In other cases, however, it might not be needed to force the learner to look at everything in the module, but rather concentrate upon teh most important pages. In this latter case it is then suggested to put the essential pages at the top of the module and the certificate immediately thereafter.

If the pointers are set correctly throughout the module this will not change anything related to the operation of the module. In this way the teacher forces the learner to look at the essential pages only, while leaving the other pagess more as "informtion" for newcomers.

INTRODUCING **PROJECT EDU-ABCM**

By The Consortium Coordinator University Of Mauritius

Associate Professor
Dr. (Mrs.)
Pratima Devi Khadoo
Project Coordinator and
Main Contact Person
University of Mauritius
Department of Chemical
and Environmental
Engineering

The need for modernization in higher education is evident worldwide. While many institutions offer quality programs, they often struggle with limited international collaboration, a lack of entrepreneurial focus, weak industry connections, and traditional teacher-centered approaches.

To address these challenges, the Capacity Building on Student-Centered Energy Education in Cameroon, Ethiopia, Mauritius, and Mozambique project, co-funded by Erasmus+, was launched in June 2023 for a three-year duration. Its goal is to modernize higher education in the energy sector, recognizing the global impact of energy services on climate change.

This initiative brings together eight universities from Cameroon, Ethiopia, Mauritius, and Mozambique, collaborating with the University of Genoa (Italy) and KTH Royal Institute of Technology (Sweden). The project emphasizes circular economy principles to foster energy sustainability.

Led by the University of Mauritius, with the University of Douala as deputy, the project is structured into ten work packages, each with designated leadership to ensure successful implementation.

Each work package has one WP-Leader and one Deputy WP Leader for proper management and successful realisation of the project deliverables. The project also has a Management Board which meets every two weeks throughout the project for a follow-up of the project activities and other important issues.

A Management Board meets biweekly to oversee progress and address key issues, where the partners are:

- University of Mauritius (Mauritius)
- Open University Mauritius (Mauritius)
- University of Buea (Cameroon)
- University of Douala (Cameroon)
- Debre Berhan University (Ethiopia)
- Bahir Dar University (Ethiopia)
- University Eduardo Mondlane (Mozambique)
- University of Save (Mozambique)
- University of Genoa (Italy)
- KTH Royal Institute of Technology (Sweden)

The members of the project are currently developing modules in the **Explore Energy Digital Academy** platform. The modules go through a Quality Improvement Process before they are published. All partner universities will also benefit from state of the art laboratories in their respective fields of expertise. The laboratories will be developed as virtual laboratories and will be accessible online. Upon launching of the virtual laboratories and the online modules, the universities will pride themselves of high quality education in the field of Energy.

Successful EU-BEGP M24 Meeting
in Cochabamba, Bolivia

Participants from the EU-BEGP Project attending the M24 Meeting in Cochabamba, Bolivia

From February 10 to 14, 2025, the EU-BEGP Project team gathered in Cochabamba, Bolivia, for the highly anticipated M24 Face-to-Face Meeting. This event marked a crucial milestone, as it represents the 24th month of the 36-month project, officially launching the final sprint toward completion. The meeting served as a platform to assess progress, refine strategies, and strengthen collaborations among partners from Europe, Central and South America.

For the opening, Dr. Oliver Saavedra and Eng. John Medina—representing the host university and project coordinator, Universidad Privada Boliviana (UPB), and partner institution Universidad Mayor de San Simón (UMSS), respectively—welcomed all the attendees and explained the importance of international collaboration. Monica Rodriguez, PhDc, as a representative of the European Union Delegation in Bolivia, highlighted the importance of the Erasmus+ Program in Latin America.

Prof. Alex Villazón the EU-BEGP Project Coordinator gave an overview of the progress made in the two first years of the project, and finally Prof. Torsten Fransson, EEDA Coordinator, highlighted the global collaboration among all the CBHE Projects as part of the EEDA Family.

During the meeting, 52 participants from 7 countries, shared experiences and presented their progress. Throughout the week, attendees engaged in a series of strategic workshops, presentations, and collaborative sessions.

Some of the key topics within the EEDA concept that were addressed include:

- Learnify Module development training and updates.
- Train-the-Trainers sessions, ensuring knowledge transfer and sustainability.
- Live demonstrations and presentations about the progress of Remote Laboratories.
- Future collaboration within EEDA beyond the project's lifecycle.

As the EU-BEGP Project moves forward into its final phase, the insights and momentum gained from the M24 meeting will undoubtedly play a pivotal role in shaping its success and strengthening collaboration with other projects within the EEDA family.

INTERVIEW WITH ENG. MARCELO TORREJÓN ROCABADO

DEAN OF THE FACULTY OF SCIENCE AND TECHNOLOGY UMSS - BOLIVIA

The interview was conducted by Dr. Johnny Villarroel-Schneider (Researcher at CUIE-UMSS)

Eng. Marcelo Torrejón R.

How do you think the EEDA educational platform can align with the faculty's curricula, especially in the areas of energy and sustainability?

A: *The EEDA platform represents a valuable opportunity to complement the training of our students. In the Faculty of Science and Technology, we are evaluating mechanisms to integrate virtual courses that strengthen competencies in renewable energy and environmental sustainability. This includes adapting content, certifying courses, and creating strategies for students to access these resources flexibly without compromising academic quality.*

In what ways can this platform strengthen research in renewable energy at the university?

A: *The platform is a key tool to overcome limitations, such as access to specialized laboratories. By connecting with international networks and up-to-date data, our researchers will be able to collaborate on innovative projects and access cutting-edge information. This not only enriches local research but also positions UMSS university as a leader in the field of renewable energy in Bolivia.*

How can this platform be leveraged to connect the university with the productive sector, especially in renewable energy?

A: *The current energy crisis in Bolivia demands sustainable solutions. This platform will allow us to identify, with a better understanding, the needs of the productive sector, such as companies still reliant on traditional fuels. So, we can offer them training and technical advisory services. Additionally, it will facilitate the creation of strategic partnerships to implement pilot projects that promote the use of clean energy.*

What impact will the platform have on the continuous training of professors and recent graduates?

A: *Constant updating is essential. The platform offers abundant educational material, access to remote laboratories, short courses, and high-quality postgraduate programs offered by the partners universities that will enable teachers and recent graduates to stay updated with technological and pedagogical advancements. This is particularly relevant in the accreditation process of our faculty's programs (management and academic quality certifications), where academic excellence is a priority.*

Finally, how will you ensure equitable access to the platform for all students?

A: *We will work to establish agreements with internet providers to offer affordable internet services (mobile data), like those implemented during the pandemic covid-19, ensuring that internet access is not a barrier to educational resources. Additionally, we will promote the use of mobile devices and digital resources to reach students in rural areas or with economic limitations. Virtual education is a democratizing tool, and our commitment is to ensure no one is left behind.*

"The EEDA platform not only modernizes our academic offerings but also strengthens our commitment to sustainable development and educational inclusion in Bolivia", he concluded.

EEDA LEADING THE WAY IN DIGITAL EDUCATION CREDENTIALING AT EDUNINE2025

At the EDUNINE 2025 Conference, Professor Lourdes Socarrás, partner of EU-BEGP and an active member of the EEDA Program, presented the paper "**EU-BEGP: Building a Common Framework for Digital Education Credentials in Latin America**."

This work aligns with EEDA's mission to drive innovation in digital education, emphasizing the need for a unified framework to enhance credential recognition and academic mobility across Latin America. As a key facilitator of international collaboration, EEDA plays a crucial role in shaping policies and structures that support accessible and globally recognized education.

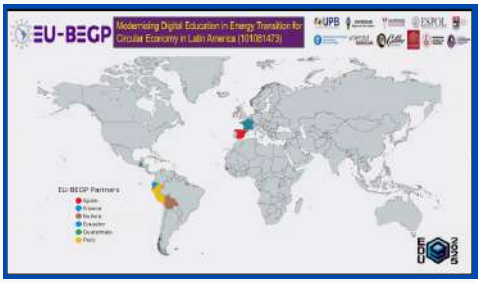
- A unified qualification framework compatible with ECTS and CLAR[1].
- Digital learning resources, co-created by institutions in Europe and Latin America.
- Innovative credit transfer models , facilitating credential recognition across regions.

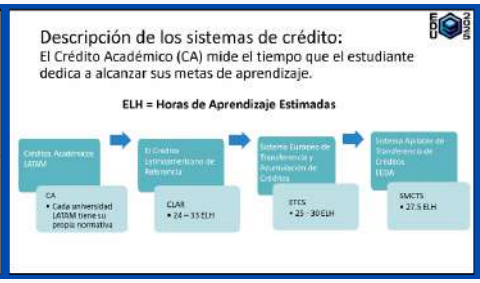
This initiative modernizes energy education and opens doors to education that is more accessible, collaborative and aligned with global challenges.

"*Just as energy has been transformed in its production, transmission and use, energy education also needs innovation. That is why, at EDUNINE2025, in Uruguay, I shared how the EU-BEGP project and the EXPLORE Digital Energy Academy (EEDA) we propose to transform education through international cooperation*" -Socarrás said.

Congratulations to Professor Socarrás for advancing this important conversation and reinforcing EEDA's impact on the future of digital education!

[1]CLAR refers to the Latin American Qualifications Framework, an initiative aimed at supporting the comparability and compatibility of qualifications across Latin American countries.





Prof. Lourdes Socarrás during her presentation at EDUNINE2025

Learnify Hint: Complete Formative Assessments At The End Of A Module

In the case a module has several small "Knowledge tests" (for example a set of questions after each video or reading sequences) it is a good pedagogical approach to at the very end of the module create a random repetition of some of the questions and ask the learner to complete the repetition.

The easiest way to do this is to add all the intended questions into an excel file with different categories and then to extract, for each one of the categories, the questions intended for the specific parts, and import these at the corresponding place of the module. For the final repetition test all the questions are then extracted and imported.

If the individual smaller Knowledge tests have already been created it is possible to inverse the methodology and create the larger Knowledge test from the individual by exporting the individual Knowledge tests into an excel sheet.

More information is found in the Module "SA501-T02L04CM02: EXPLORE Energy Development Hints Module", Activity 3.39.

New Learnify Module: A Module ”Introduction To Gender In Energy Services And Infrastructure”

A module ”**Introduction to Gender in Energy Services and Infrastructure**” is under development. If anyone would like to give preliminary feedback on this please contact Fransson.kth@outlook.com

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EEDA Development: Template For Challenges

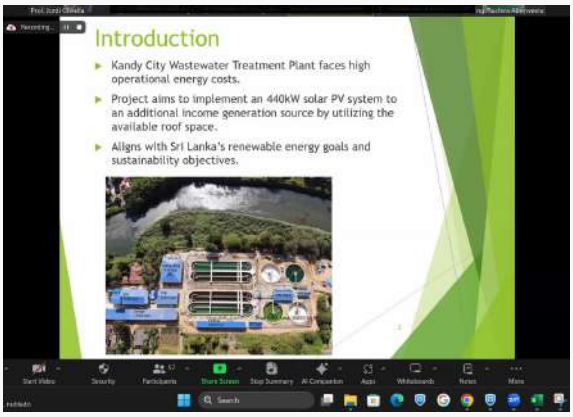
A template for how to easily prepare an "**EEDA Challenge**" in the repository, and thereafter to conduct this towards students has been established.

To get access, please contact Fransson.kth@outlook.com.

Find the example of the template to the right.

CONCLUSION TO THE "ENERGY PROJECT PLANNING AND MANAGEMENT" COURSE IN THE MECE PROGRAM AT OUSL

By Jordi Olivella - Universitat Politècnica de Catalunya



This is the second cohort of this innovative Master's degree, offered in collaboration among four leading universities in Sri Lanka: Open University of Sri Lanka, University of Moratuwa, University of Peradeniya and University of Ruhuna.

It has been incredibly rewarding to guide these talented students as they developed and presented their outstanding projects. The students demonstrated a thorough grasp of energy project development principles. Diverse topics included renewable energy integration, waste-to-energy solutions, energy efficiency in industrial processes, green building certification, and automated energy management systems.

Thanks Ruchira Abeyweera for your trust and support and congratulations to all participants on their hard work and excellent project outcomes!

Participation of UFRJ in the 20th Brazilian Congress of Thermal Sciences and Engineering (ENCIT 2024)

The Brazilian Congress of Thermal Sciences and Engineering (ENCIT 2024), organized by ABCM, was held in Foz do Iguaçu, Brazil, from November 10 to 14.

During the plenary session, Professor Silvio Carlos Anibal de Almeida presented his paper, "Experimental determination of the polarization curve of a PEM fuel cell." The study features the Remote Fuel Cell Laboratory developed at UFRJ for the Renewable Energy Course offered by USP and UFRJ within the EUBBC-Digital Project framework.

The presentation sparked significant interest among researchers, highlighting the lab's value in training undergraduate and graduate students using innovative digital tools.

TESTIMONIAL FROM UNIVERSIDAD SAN SIMÓN (UMSS)

Learning Without Barriers: My Experience With Learnify

Engineer
Juan Pablo Aruchari
Master Student
Energy Systems
Modelling Program
UMSS - Bolivia

"Learnify has completely changed the way I learn. The ability to access remote labs in Greece, or anywhere, regardless of my location, is truly transformative. I was particularly impressed by the unique and practical resources that were unavailable anywhere else.

The structured curriculum, coupled with expert support for each lesson, is exceptional. I can now use my time in the public transport to maximize learning, reviewing videos, research papers, and lessons directly on my phone. What I value most is that many of the material creators have real-world experience.

They don't just teach theoretical concepts; they share practical insights that I can directly apply to my work and renewable energy research.

The flexibility to revisit materials as often as needed, on my phone or computer, is incredibly beneficial. Even my colleagues are astounded by the progress I've made! Learnify has proven that high-quality education transcends traditional schedules and limitations. I no longer waste time, as my classes are accessible anytime, anywhere.

Learnify isn't just a glimpse into the future of learning; it's the present, and it's something everyone should experience. It represents the future of education, where learning is accessible to all, without boundaries or excuses."

🌐 EEDA IS GOING SOCIAL!

Get ready to connect with us like never before!
Very soon, the **Explore Digital Energy Academy** (EEDA) will launch its official pages on LinkedIn and Facebook—bringing our community of energy educators, learners, and innovators even closer.

Through these new channels, you'll be able to:

- 🌟 Stay updated with fresh content, insights, and upcoming modules
- 🤝 Connect with experts and institutions involved in the energy transition
- 📢 Share your stories, ideas, and impact from around the world

Whether you're a teacher, a student, or a partner in innovation, we're building these spaces for you. Stay tuned!

🚀 **Follow us soon. Join the digital energy conversation.**

PROGRAMS POWERED BY EEDA

MSc MECE: Master in Science in Energy for Circular Economy
Open University of Sri Lanka (OUSL), University of Moratuwa, University of Ruhuna and University of Peradeniya
This master program in English helps students develop practical skills and knowledge required to critically evaluate alternative energy sources, and provide feasible solutions.
Please visit: https://eusl.edu.lk

Diplomado in Renewable Energy Systems Technology and Management
Double certification Diplomado with Universidad Mayor de San Simón and Universidad Privada Boliviana.
The Diplomado emphasizes on Energy Efficiency, Photovoltaic Systems, Wind, Biomass and Energy Storage
For more information visit:
https://tinyurl.com/EUBBC-Diplomado

Universidad Mayor de San Simón (UMSS), through its University Center for Energy Research (Centro Universitario de Investigaciones en Energías) and the postgraduate program of the Faculty of Science and Technology, has launched a new academic initiative under the umbrella of the EUBBC-Digital project.

As part of its commitment to promote advanced education in the energy sector, UMSS is offering the **Master of Science in Energy Systems Modeling** (MCMSE)—a fully online program designed in collaboration with European and Latin American universities. This innovative master's program leverages globally available digital learning modules hosted on the Learnify platform, enabling a collaborative and flexible learning experience.

The MCMSE program aims to equip young professionals with high-level technical knowledge and practical skills in energy systems modeling. Through advanced mathematical modeling and simulation techniques, students will learn to analyze and predict the behavior of complex energy systems composed of multiple technologies, addressing diverse energy demands. Please visit: https://posgrado.fcyt.umss.edu.bo

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