

EEDA



**EXPLORE ENERGY
DIGITAL ACADEMY**



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NEWSLETTER

SPECIAL EDITION

UPC NEW COURSE: PRODUCT ORGANISATION

ESPOL: PUBLICATION WITHIN EU-BEGP

UPB: ELECTRIC VEHICLE CHALLENGE

MECE PROGRAM: REFLECTIONS



FROM THE EDITOR

September! We pause to recognize not only the courses and initiatives being launched across our network, but also the growing ecosystem that makes them possible. Step by step, EEDA is becoming more than a project — it is a movement shaping the future of education.

This month, we see how ideas take form in very tangible ways: a new course launched at Universitat Politècnica de Catalunya (UPC), a bold reflection on coordinating an advanced master's program in Sri

Lanka, and research from ESPOL that pushes the boundaries of how energy education can innovate. Alongside these academic milestones, the exploration of electric-vehicle-based distribution systems reminds us that our mission is not confined to lecture halls, but extends to solving real-world challenges in the green and digital transition.

At the heart of these advances lies EEDA itself. More than a network, EEDA is the platform that connects vision with action. It provides the space where institutions can share knowledge, where good ideas gain visibility, and where local experiences can be amplified into global lessons. Without this collective framework, many of these initiatives would remain isolated. Instead, through EEDA, they become part of a larger story — one that speaks of resilience, innovation, and a shared commitment to education as a driver of transformation.

What connects all of these efforts is a shared conviction: collaboration works. When educators, students, and institutions commit to building together, the result is not only knowledge — it is transformation. Every syllabus drafted, every article published, every pilot project tested adds a brick to the foundation of an education system that is more responsive, more resilient, and more relevant.

We also know that none of this happens in isolation. The courage to try new approaches, the patience to refine them, and the vision to share them widely are all strengthened by the network we are building together. This community has shown once again that higher education is at its best when it embraces diversity — of perspectives, of contexts, and of ambitions.

As you read through this edition, take a moment to celebrate the progress reflected in these stories. They remind us that while the challenges ahead are complex, they are not insurmountable. Step by step, course by course, project by project, we are demonstrating that education can be a catalyst for the change our societies urgently need.

Thank you for being part of this journey. The future is being written in classrooms, research papers, and field projects across our network — and together, we are ensuring that it speaks the language of sustainability, innovation, and hope.

Together with EEDA, we are not just following change — we are leading it.

New Course Launch: Production Organisation Universitat Politècnica De Catalunya (UPC)



How do we make production systems smarter, more efficient and more sustainable?

That's the question at the heart of Production Organisation, a new course from the Polytechnic University of Catalunya now available through the [EEDA OpenedX Platform](#).

Blending theory with practice, the course introduces participants to the tools and

strategies that shape successful production environments (from cost and investment analysis to project management, facility location, stock management and operations planning). With short and engaging video lessons followed by interactive tests and exercises, learners can immediately put knowledge into practice.

No prior experience is required, making this course a valuable resource for university students eager to build their skills, as well as production managers and SME professionals seeking to optimise their operations. Whether you are starting your journey in industrial management or looking to sharpen your expertise, Production Organisation offers the tools you need to navigate today's evolving production landscape.

Guided by **Bruno Domenech**, Associate Professor at UPC's Department of Management, the course highlights the role of quantitative methods in solving real-world challenges in production systems. By the end of this course, learners will be able to:

- Explain key concepts in production organisation.
- Select and apply quantitative tools appropriate for different production problems.
- Analyse costs and investments for productive systems, being able to evaluate trade-offs, benefits, and risks.
- Plan production processes, including forecasting materials needed, scheduling operations, and managing stocks/inventory to meet demand efficiently.
- Make decisions about facility location to optimize logistics in a system.
- Manage operations programming to schedule tasks/operations to improve efficiency.

This new course reflects UPC's commitment on equipping learners with the knowledge and practical skills demanded by today's industry, while contributing to the wider EEDA mission of strengthening education for the energy transition and sustainable development. By joining Production Organisation, participants not only gain technical expertise but also become part of a growing community of innovators shaping smarter and more sustainable production systems across Europe and beyond.

Erasmus+ Collaboration In Action: ESPOL Publishes On Innovation In Energy Education

The Erasmus+ community continues to showcase how international collaboration drives innovation in education. We are pleased to highlight that **Dr. Juan Peralta** from Escuela Superior Politécnica del Litoral (ESPOL), Ecuador, a partner in the EU-BEGP project, has published an article in Revista Científica INGENIAR that reflects the transformative spirit of Erasmus+.

Entitled **“Innovation in Energy Education: Remote Laboratories and Modules on Energy Transition and Renewable Sources”** the publication presents concrete outcomes from the EU-BEGP initiative:

- Eleven interactive modules on renewable energy and circular economy, designed to be used by educators and students worldwide.
- The deployment of 24/7 remote laboratories, simulating real operating conditions and accessible even in regions with limited connectivity.
- The integration of these resources on the Learnify platform, ensuring global reach and long-term sustainability.

This achievement would not have been possible without the work of the Explore Energy Digital Academy (EEDA), which plays a vital role in developing and hosting the modules through Learnify.

By providing a digital hub for innovation, EEDA ensures that knowledge generated in Erasmus+ projects becomes accessible to higher education institutions across the world.

It is an inspiring example of how our community drives change: knowledge and tools developed under Erasmus+ are not confined to one region—they benefit educators and learners globally. By combining academic expertise from Europe and Latin America, this work demonstrates how Erasmus+ projects can directly support Energy Transition focused in education.

This milestone underlines the value of Erasmus+ in empowering institutions to design solutions that are both innovative and inclusive—bridging continents, disciplines, and communities.

📖 Access the complete article in Spanish via this link:

<https://journalingeniar.org/index.php/ingeniar/article/view/359>



Cover page of Revista Científica INGENIAR

Course and Project Overview: EV-Based Consumer Packaged Goods (CPG) Distribution

UPB-Bolivia recently launched the course “**Design of Distribution Systems for Consumer Packaged Goods (CPGs) using Electric Vehicles**”, under the direction of **Mgr. Agatha da Silva**. Delivered through Learnify in a flipped-classroom format, the course guided students through four modules—EV fundamentals, facility location, distribution design, and a final challenge.

The highlight was a challenge-driven learning project, where teams designed EV distribution systems balancing siting, routing, cost, sustainability, and real EV constraints such as range and charging.

This hands-on approach fostered teamwork, autonomy, and the ability to present findings to both technical and non-technical audiences.

Collaboration with Universidade Federal de Rio de Janeiro (UFRJ), led by Prof. Lino Marujo, enriched the experience with expertise in sustainable supply chains and urban logistics. Students also gained practical exposure through a visit to Electromovilidad Bolivia, where CEO Julio Zubieta demonstrated how internal combustion cars are converted into EVs—bridging academia and industry.

By combining theory, collaboration, and real-world practice, the course equipped students with modeling tools (FLP, TSP, VRP, heuristics, OR-Tools) and sustainability metrics to propose viable, context-sensitive EV-based solutions for CPG distribution.

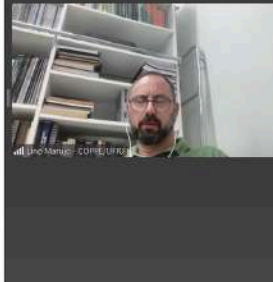


Behavior - collaboration

- **Collaboration** is typically an outward-looking behavior change.
- It is referred to as 'horizontal' as it can take place among carriers or receivers, which could be from different companies.
- Example ways collaboration can avoid freight kilometers:
- Receivers can cooperate by agreeing on a mutual delivery day or time among those delivered by the same supplier. Sometimes such a cooperation can lead to a real partnership in purchasing goods and hiring transport (e.g. [SMILE Sweden](#)).
- Carriers can also collaborate together by pooling the volumes together and increasing their vehicle fill rate. (e.g. [Teamtrans](#))



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REFLECTIONS ON COORDINATING THE APPLIED THERMAL ENGINEERING COURSE IN THE MECE MASTER'S PROGRAM IN ENERGY FOR CIRCULAR ECONOMY AT THE UNIVERSITY OF PERADENIYA (SRI LANKA)



by Dr. Indrani Kularathne
Coordinator

"Over the past two years, coordinating the Applied Thermal Engineering course in the MSc in Energy for Circular Economy (MECE) has been both an honour and a transformative experience. Offered by four Sri Lankan universities in partnership with KTH (Sweden), CentraleSupélec (France), and University of Twente (Netherlands), the MECE program is a key outcome of the Erasmus+-funded EUSL-Energy project."

The course, worth 3 SL credits (6 ECTS), is run entirely in a flipped-classroom format, giving students online access to all materials and videos while reinforcing learning through workshops and assignments. Structured into four lessons—energy concepts, thermodynamics, heat and mass transfer, and combustion—the course combines contributions from distinguished experts including emeritus Prof. Daniel Favrat (EPFL), Prof. D.G.D.P. Karunarathne, Dr. I.W. Kularathne, and Eng. Lekha Bakmeedeniya.



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Participation has steadily grown from 122 students in the first cohort to 191 in the third, many of them professionals balancing careers and studies. Feedback highlights the flexibility of the flipped model and the value of interactive workshops led by both Sri Lankan and European academics. Adjustments made after the first cohort—such as motivational strategies for workshops—have significantly boosted engagement and learning outcomes.

More than an academic course, Applied Thermal Engineering has become a platform for shaping future leaders who will address Sri Lanka's energy challenges through sustainable and circular approaches. Its success reflects the dedication of the teaching team, whose collaborative spirit continues to inspire students and strengthen international partnerships.

UNLOCKING KNOWLEDGE- LEARNIFY: THE EEDA REPOSITORY

One of the most powerful outcomes of EEDA is not only the courses we design or the research we share, but the fact that all these resources are made accessible through our EEDA Repository, Learnify.

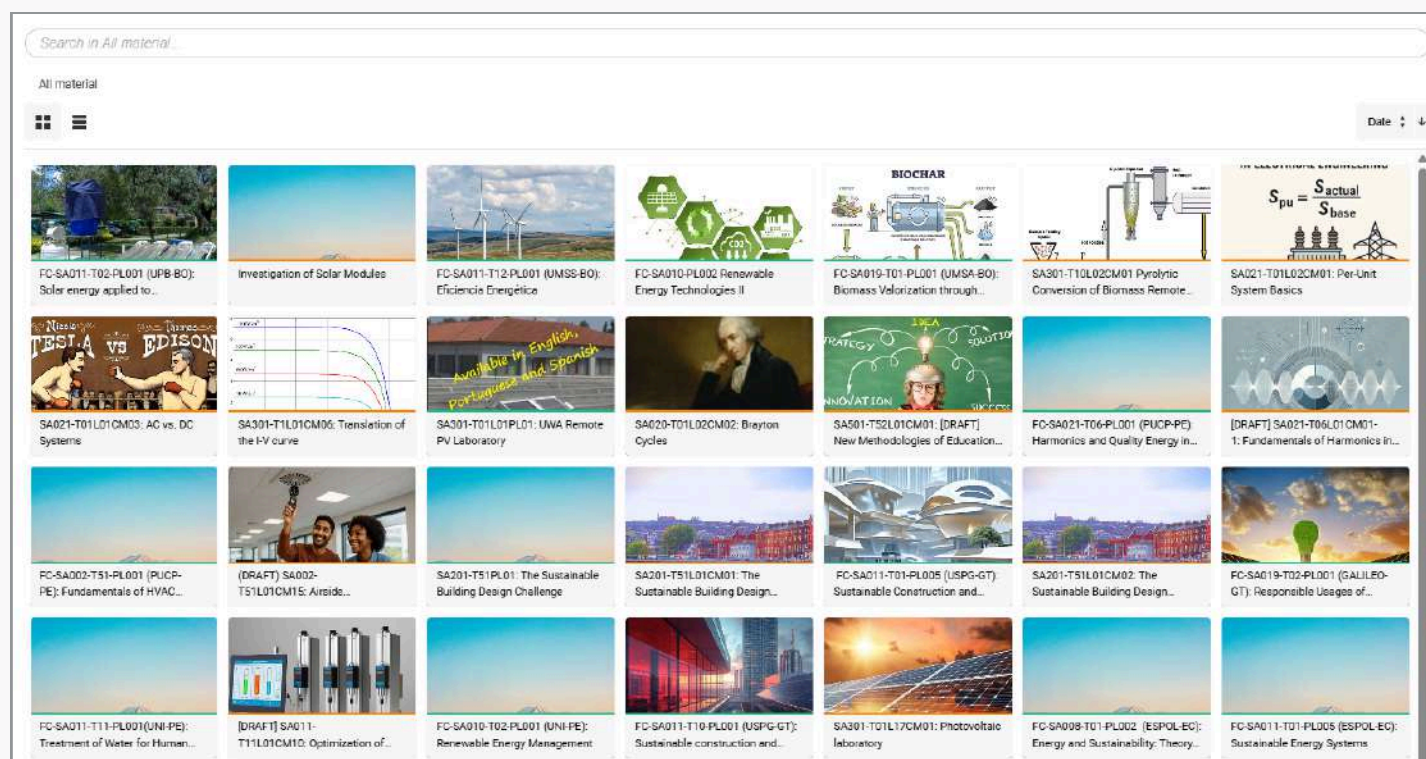
This online platform gathers the collective work of our partners – from course modules and teaching material to research insights and project ideas. It is a growing library where educators, students, and institutions can find inspiration, adapt existing content, and contribute their own.

How to use it?

Visit the EEDA Learnify Repository → <https://time.learnify.se/h/>

Browse materials by course, topic, or partner institution

Examine and work on what you need – or upload your own contributions to enrich the community



Screenshot of Learnify's library of existing resources

By making our resources openly available, we strengthen the impact of every project and ensure that ideas developed in one classroom can inspire many more across the world.

The repository is not just a collection of files – it is the living memory of our network and a key driver of our mission to transform higher education for the green and digital transition.

👉 Explore the Learnify Repository today and be part of a growing community of educators shaping the future. **New to the Repository?** [Create your account here](#). Your next idea – or your next resource – is just one click away!