

A shared Master's, taught in three countries

CEBCAT is a shared Master's curriculum in circular economy, taught at partner universities in Indonesia, Laos and Vietnam. Take a closer look at the program, and at the first insights from the universities already teaching it.

Why the project exists

CEBCAT brings together eleven partners from Europe and Southeast Asia to strengthen postgraduate education in Indonesia, Laos and Vietnam around environmental sustainability, circular economy and cleaner energy.

The project is developing a shared curriculum, staff capacity, digital learning resources and mobility activities. This issue reports progress at each partner university and explains how the shared framework is being delivered locally.

What the programme is

The shared CEBCAT framework includes six modules, jointly developed by European and Asian partners. They cover circular-economy foundations, pollution measurement, energy economics, future energy systems, regulatory frameworks, and reporting and research skills. Several modules include a section on Asian perspectives, written by the Asian partners themselves.

The digital platform is intended to keep training materials available after the funding period, while mobility activities support cross-country collaboration and knowledge-sharing among students and staff.



A circular economy course in session at IPB University, Bogor.

Who it is for

The postgraduate offer is intended for recent graduates and professionals in energy, manufacturing, waste management and public administration. Academic staff can use the curriculum and capacity-building activities. The final module focuses on reporting and research skills.

Where and when

The programme is delivered across partner universities in Indonesia, Laos and Vietnam. Delivery dates, entry requirements and application procedures vary from one university to another. For current information, visit cebc.eu and contact the relevant partner university.

WHY THE PROGRAMME EXISTS · NOVEL GROUP AND USC

Circularity is also a skills problem

The CEBCAT project began with the University of Santiago de Compostela and Novel Group, who both believed and invested in a single premise: the circular transition will be delivered by people, and those people need skills current curricula do not teach.

From environmental policy to practical competence

The transition to a circular economy is no longer only an environmental-policy matter. It also affects industrial production, energy systems, education, employment and international cooperation. Novel Group's contribution frames circularity as a skills challenge, since professionals may need to understand new technologies, manage environmental initiatives, redesign processes and connect policy objectives with operational practice.

CEBCAT therefore addresses recent graduates and working professionals, linking postgraduate learning to the practical demands of transition. That reasoning shaped the curriculum and its target audience.



CEBCAT students using the computer laboratory supported by the project, at HUST.

Evidence before the curriculum

A master's programme cannot be designed apart from the people who teach and study it. CEBCAT ran a two-round consultation so the curriculum would rest on evidence of real training needs, not assumption. EUROTRAINING designed the instruments, the six Asian partners convened the focus groups, and the University of Thessaly integrated and analysed the results. Eighty-five students and staff confirmed the direction, and made suggestions. All were taken into consideration for the new master's programme.

Built around sectors in motion

Automotive production is changing through resource efficiency, alternative materials, electrification, repair, reuse and remanufacturing. Energy systems is also transitioning through renewables, green hydrogen, biofuels, energy efficiency and reduced fossil-fuel dependence. These developments can alter the skills expected in workplaces and public institutions, which is why CEBCAT places them within an education and skills framework.

European experience is also in need of adaptation to local economic structures, industrial realities, institutional capacities and workforce needs. In this account, cooperation is a process of exchange and adaptation rather than one-directional transfer.



The heads of USC and Novel Group at the CEBCAT consortium meeting in Laos, 22–26 September 2025.

Disseminations and conferences

A programme has little standing if its methods and results stay inside the consortium. Dissemination at conferences makes CEBCAT known to the people who teach, research and recruit in sustainability education, and it is how the work is tested before it is taught. Peer questions and comparisons with other curricula feed the next version of the syllabus. The CEBCAT projects results have been presented to various conferences, like the 14th Panhellenic Conference on Science Education and the 6th National Conference of New Researchers.

THE MASTER SYLLABUS

What you will study

Six modules move from circular-economy foundations to the reporting and research skills needed for practical problems.

Basics of Sustainability and Circular Economy

Environmental problems and planetary boundaries open the module, which then considers ecosystems as flows of energy and cycles of matter. It traces the origins of circularity and explains the relevance of thermodynamics.

Environmental Pollution Measurement Techniques

Characterising pollution in soil, water and air is the starting point, with ecological and water footprints and material flow analysis. The practical component covers ISO- and SNI-based methods, operational standards and field case studies.

Economics of Energy

The module examines the global energy structure, energy pricing and the role of large conglomerates. It approaches renewables economically and treats energy transitions as socio-technical processes, including how they are governed and financed.

For teaching staff

Alongside curriculum development, partners have run sessions for academic staff on course design, assessment, 21st-century skills, critical thinking and COIL (collaborative online international learning). The aim is to develop the teaching capacity needed to use the new content effectively.

The Role of Fossil Fuels in Future Energy Systems

Module 4 reviews recent oil, gas, coal and renewable-energy developments, compares the European Green Deal with United States policy, and considers strategies from Asian contexts.

Regulatory Frameworks for Sustainability and Circularity

Capacity-building analysis is the entry point, with methods for assessing national gaps and alignment with international climate commitments. The automotive sector provides a case, with green hydrogen as one direction of travel and Asian perspectives included.

Reporting Techniques and Research Skills

Across IMRaD, guidelines such as PRISMA, STROBE and CONSORT, clear argumentation, responsible data visualisation and FAIR data principles, the module develops the reporting and research skills needed to read and produce circular-economy work.



CEBCAT students actively participating in discussions and presentations during various training courses.

ALREADY TEACHING · IPB UNIVERSITY, INDONESIA

Two new courses, learning in the field

IPB University began two circular economy courses in its Master programme in January 2026. In May and June, students joined field trips to observe practical applications.

What is being taught

IPB University delivered two new courses in January 2026: Principles and Policies of Circular Economy for Sustainability, and Circular Economy in Food and Energy Systems. Both form a circular economy concentration within the Master Study Program of Resources and Environmental Economics.

The first examines regulatory frameworks, policy instruments, governance mechanisms and strategies for moving from a linear to a circular economy. The second applies circular principles to food and energy, including resource efficiency, waste valorisation, renewable-energy integration and sustainable production–consumption systems.

Out of the classroom

On 12 May 2026, the Food and Energy Circular Economy group visited Cibanteng Village in Bogor to observe circular principles at community level. On 13 June, the Principles and Policies group visited PR SWEN, which links livestock, fisheries, fertiliser production and agriculture.



Cibanteng Village, Bogor, 12 May 2026: tilapia farming, low-carbon practice, compost from organic waste.

Beyond the trip

The field trips complemented classroom learning with direct observation of circular-economy applications. The partner contribution expects these activities to strengthen analytical and practical skills for sustainable resource management. At IPB, the two courses form a circular economy concentration within an existing Master programme.

Where the material comes from

The courses use CEBCAT modules, case studies and learning resources developed through consortium collaboration. Teaching includes lectures, group discussions, case analyses and project-based assignments, combining conceptual understanding with opportunities for practical application.

For IPB, the work also contributes to curriculum development, knowledge transfer and institutional collaboration within the consortium.

What the trips offered

Students talked with practitioners and observed production systems directly. The visits complemented classroom learning by showing how resource management, environmental protection and economic development can be considered together.



PR SWEN, 13 June 2026: livestock, fisheries, fertiliser production and agriculture running as one system.

First insights · HUST, HANOI

Teaching under way, more modules planned

Hanoi University of Science and Technology began teaching in July 2026. Two modules are already running, and the other four begin in September.

What is running

In July 2026, HUST began Module 1, Basics of Sustainability and Circular Economy versus Linear Economic System, and Module 3, Economics of Energy, with six and four students respectively; four more modules were planned for September.

Module 1 is worth 10 ECTS and comprises Environmental Problems and Planetary Boundaries and Strategies for a Circular Economy. The course poster lists up to 20 participants and a certificate on successful completion.

The first cohorts

HUST reported six students in Module 1 and four in Module 3, with four more modules planned from September 2026. The course poster lists registration in July, October, January and April.



Students from the first CEBCAT rounds at HUST, which opened in July 2026 with Module 1 and Module 3.

The next round

HUST has scheduled a further Module 1 round for February–April 2027, with registration in January 2027. Prospective participants should confirm dates, eligibility and application arrangements directly with HUST or through cebcateu.org.

How it is taught

HUST describes a combination of in-class learning, practical activities and e-learning, involving lecturers from HUST's Faculty of Environmental Science and Technology and CEBCAT lecturers. Online CEBCAT lectures are intended to complement this work; however, the first students had been directed to the platform but could not access it at the time of writing.

HUST also reported that students were engaged in classroom projects and discussions.

Rethinking the resource lifecycle

HUST presents circular economy as extending beyond recycling to the whole lifecycle of resources, including how economic systems produce, consume and design for human needs within planetary boundaries.



Module 1 participants at HUST at the end of the round, with their lecturer.

FROM THE FIELD · VNUA, HANOI

Into the projects, early

At Vietnam National University of Agriculture, four students in the CEBCAT Master's programme join applied research and development projects early. They work on agricultural problems with real stakeholders and meet research practice while they are still learning. They want to reshape agricultural economic development, with attention to green growth, circular economy and sustainable development, which is close to what the programme set out to do. The university emphasises the connection between academic learning, research, practical projects and international cooperation.

Students also joined CEBCAT events organised at VNUA, where they met researchers, lecturers, practitioners and partners from other countries. The team points to confidence, research capacity and the ability to work across different perspectives as outcomes of those events. VNUA encourages other universities to use the opportunities the programme provides and to involve students in projects and research from an early stage.



Partners and VNUA staff at the welcome for the study visit.



Partners with VNUA staff and students during the same visit.

“From learning to action, CEBCAT empowers the next generation to reshape agriculture through green growth, circular economy, and sustainable development.”

CEBCAT team, Vietnam National University of Agriculture

What comes next

Future issues will report contributions from students and staff, and show how the curriculum is being adapted locally. Confirm dates and procedures through cebcats.eu or the relevant partner university.

The consortium

Europe

University of Santiago de Compostela, Spain · University of Thessaly, Greece · Universitatea Lucian Blaga din Sibiu, Romania · NOVEL Group, Luxembourg · EUROTRAINING Educational Organisation, Greece

Southeast Asia

Vietnam National University of Agriculture and Hanoi University of Science and Technology, Vietnam · Universitas Sebelas Maret and IPB University, Indonesia · National University of Laos and Savannakhet University, Laos

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