



**european
bioeconomy
university**

Shaping Education for the European Bioeconomy

Prof. Iris Lewandowski, University of Hohenheim



The need for Bioeconomy education

There is a **growing workforce in the European Bioeconomy** - and in order to realize the transformation towards a sustainable Bioeconomy, experts are required.

Dedicated Bioeconomy education programs are needed to make sure the **manifold skills sets** are available, making sure that the future workforce responds to the upcoming needs of all **bioeconomy sectors** (primary production, industry, etc.) and **across bioeconomy disciplines** (e.g. at the interface of agronomy, biorefining, ecology, and other disciplines) as well as to the **requirements of sustainability and circularity**.

Dedicated Bioeconomy education programs

- To educate **Bioeconomy experts** that meet the **range in expertise** required in the circular sustainable workforce and have the technical knowledge in the different Bioeconomy sectors and at the same time are able to link their expertise across sectors and to the biobased value chain and that can help to prevent climate change
- to provide **inter- and transdisciplinary skills for sustainability** experts with a holistic view, i.e. educating system changers, who can support the transition to a sustainable Bioeconomy.
- to train the **educators** who can offer **Bioeconomy education at various levels** from primary school, through to higher education, vocational training and life-long-learning
- experts that are able to address the **regional needs** of Bioeconomy implementation all over Europe and help to draw benefits and synergies from regional strengths, especially for new growth in rural and coastal areas



Cooperation at European level required!

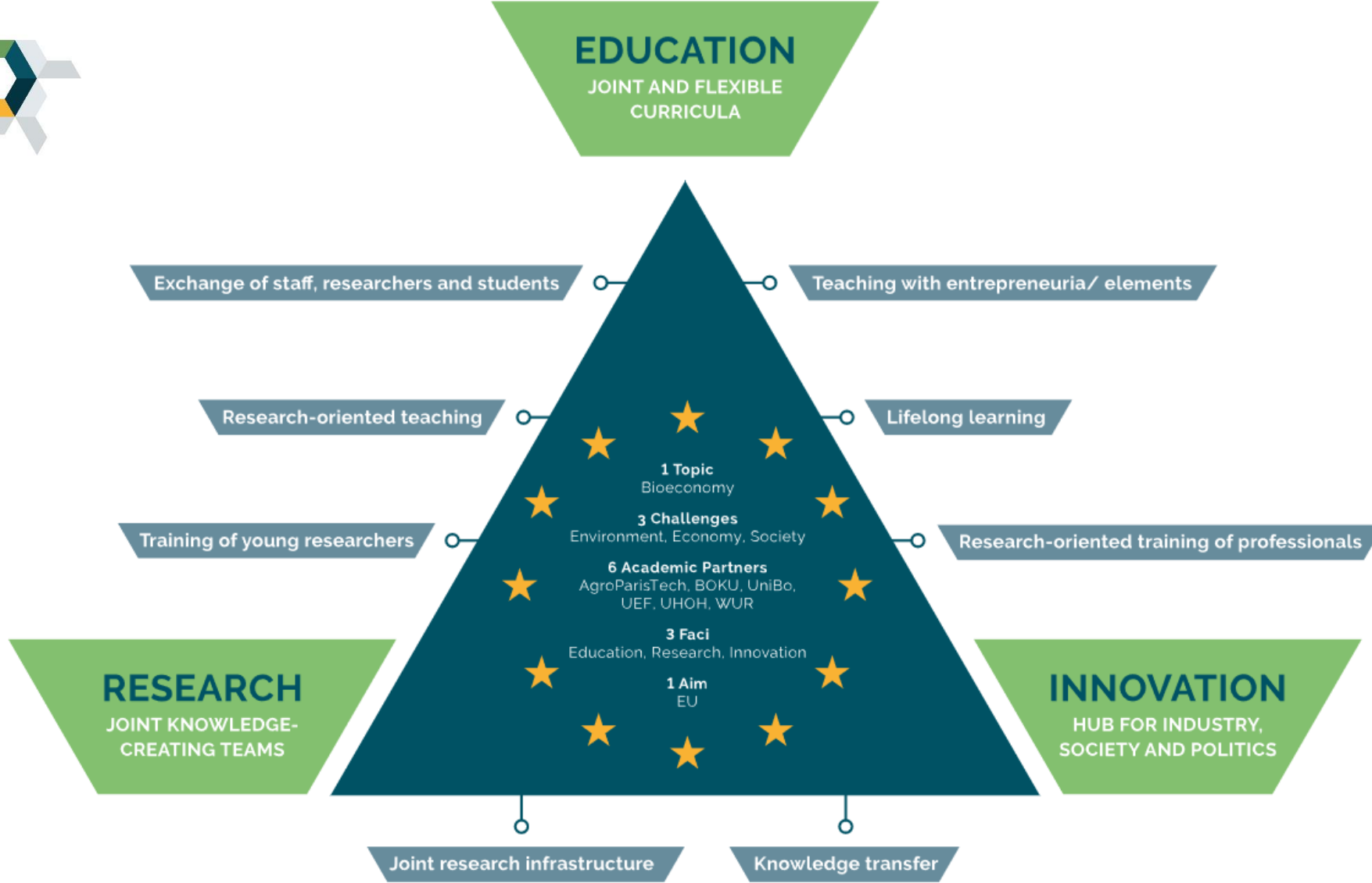


Europe Map by Randomhero from the Noun Project

Our Mission

The empowerment of the European knowledge-based bioeconomy.

- ❖ Educating a new generation of truly European experts
- ❖ Fostering rigorous, relevant and responsible research
- ❖ Transferring knowledge into society and the economy





...is to come from the skills demand in the European Bioeconomy and to align bioeconomy curricula across Europe

➔ *The European Bioeconomy University Education Strategy*

- Based on systematic assessment of the skills demand of the European bioeconomy industry
 - including international and larger companies, SMEs and startups - and stakeholders
- Strives for an inclusive education program for students on all levels including lifelong learners and professionals:
 - innovative didactic approaches for the inclusion of interdisciplinary, research-oriented learning and entrepreneurial thinking (starting at Bachelor level)
 - collaborative, skills-demand-driven Master study program
 - common platform with online educational material on the bioeconomy
 - mobility program for students' and lecturers' exchange between EBU partners
- Strengthens the involvement of industry and stakeholders in teaching and curriculum development
- Develops policy recommendations for bioeconomy education

EBU - Together we cover all bioeconomic topics



EBU education program

Bioeconomy Master programs offered at all EBU Universities

EU and BBI Education Projects

EBU label as joint program with European bioeconomy qualification (EBU label)

Development of Entrepreneurial Education formats (FOEBE)

Designing Biobased Education Centres for different regions in Europe (BIObec)

What are we offering for others?

- open access Textbook – Bioeconomy - Shaping the Transition to a Sustainable, Biobased Economy
- MOOCS (ABBEE) = Online and open access education courses
- Exchange on Education format:
 - Workshop on Education of Global Bioeconomy Summit (see Report)
 - EBU Scientific Forum – **22nd September 2021**: Sessions on education
 - <https://european-bioeconomy-university.eu/ebu-scientific-forum-save-the-date/>

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UNIVERSITY OF HOHENHEIM

International Master's Program in BIOECONOMY University of Hohenheim



Value chain / web perspective

T-Profile

Systematic, integrative and participative approaches

Disciplinary expertise



Resource Production



Properties



Conversion



Biobased Products




Market introduction



EBU Qualification supplement

European Bioeconomy qualification program





european
bioeconomy
university

Qualification Supplement

The European Bioeconomy University has conferred this certificate upon

|Title| |Complete Name|


born |birth date| in |birth place|

for the successful completion of the requirements for the

|Title|

|Place|, |date|

Signatures



european
bioeconomy
university

Qualification Supplement

Holder information including the university and the master program

Fulfilled criteria details:

- Master program
- T-shape profile
- EBU student journey
- Master theses

Function of the qualification

Additional information (about the EBU)

Signatures



FOSTERING ENTREPRENEURSHIP FOR THE BIOECONOMY

Revolve around a blended learning format which combines e-learning and face-to-face sessions, with an emphasis on innovative pedagogical practices

FOEBE aims at equipping bioeconomy students at Master's and PhD levels with tailor-made sustainable entrepreneurship skills through:

- Design of skills portfolio and curricula for entrepreneurship based on bioeconomy start up observations' to define competences profiles
- Innovative teaching practices (i.e. hackathon, student competition, non-formal education learning activities, contextual learning) in order to work out the possible options to apply for entrepreneurship in the bioeconomy
- A digital learning platform to support the development of courses and training materials
- Guidelines on pedagogical resources and innovative teaching practices to foster the entrepreneurial mindset of bioeconomy students
- Add-on curricula for graduate students enriching their academic program



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MOOCs

Home ▾

ABBEE >

| Place in the value chain | New course | Partners |
|--|--------------------------------|---|
| System approach (value chain overlooking) | Value Chain biobased economy | University of Hohenheim in close cooperation with BIOPRO |
| | Sustainable Entrepreneurship | University of Wageningen in close cooperation with Start-Life |
| Biomass production | Sustainable Biomass production | Aarhus University in close cooperation with SEGES and INBIOM |
| | Biomass production by forestry | University of Eastern Finland in close cooperation with Metsä Group |
| Biorefinery/conversion | Wood biorefinery | University of Eastern Finland in close cooperation with Metsä Group |



**Strategic Partnership ABBEE
(Accelerating the transition
towards the Bio-Based Economy
via Education)**

Co-funded by the
Erasmus+ Programme
of the European Union



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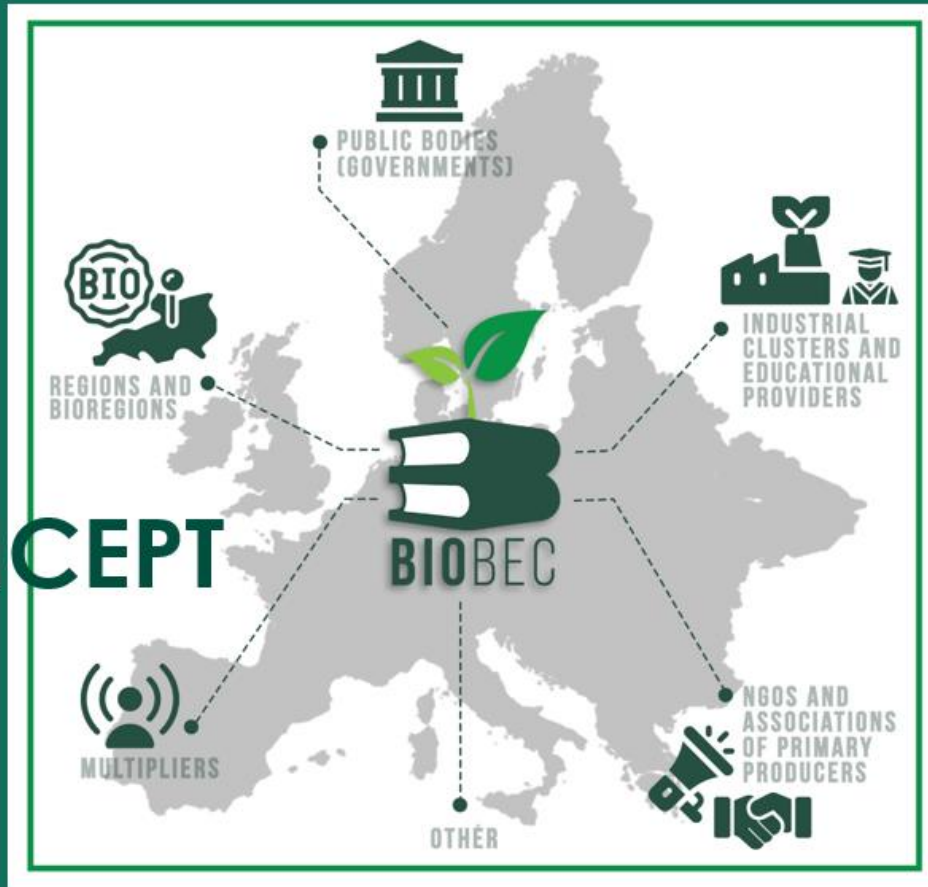
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CONCEPT



General objective

To create a holistic framework for developing and establishing multi-level **Bio-Based Education Centres (BBECs)** that are flexible enough to answer the present and future needs of the industry and of the surrounding ecosystem at local, regional and/or national levels

Co-ordination



ALMA MATER STUDIORUM
UNIVERSITA DI BOLOGNA

Funding





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Thank you for your attention!



AgroParisTech
INSTITUT DES SCIENCES ET INDUSTRIES DES VÉGÉTAUX ET DE L'ENVIRONNEMENT
PARIS-UNIVERSITÉ DE TECHNOLOGIE POUR L'AGRICULTURE ET L'ENVIRONNEMENT



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA



UNIVERSITY OF
EASTERN FINLAND



UNIVERSITY OF
HOHENHEIM



University of Natural Resources
and Life Sciences, Vienna



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