



## ICA Community of Practice for Bioeconomy Education

### Colloquium 2022

# Interdisciplinary Education for the Bioeconomy: embedding the mindset of the bioeconomy in the curricula of Bachelor degree programmes

Thursday 19 and Friday 20 May

to be held at the Monasterium Poortackere, Ghent, Belgium

All details are also online at <https://www.ica-europe.info/cop-colloquium-focus>

### A Colloquium focus

The Colloquium will focus on education for the Bioeconomy at the Bachelor level, with the focus on the ambition to develop the mindset of students for the Sustainable Circular Bioeconomy through the curriculum of Bachelor degree programmes.

Students follow many different Bachelor degree programmes which can provide opportunities for careers in the different fields of the bioeconomy represented by agriculture, forestry, horticulture, blue economy, food value chain, biotechnology, and the bio-based economy. However, many graduates on leaving education are not aware of the career opportunities and the scope of the Sustainable Circular Bioeconomy. Employers in these industries need staff who bring the perspective of the Sustainable Circular Bioeconomy to their particular job in the workplace.

These many existing specific Bachelor degree programmes, related to the many disciplines<sup>1</sup> underpinning the Bioeconomy, need to incorporate within the curriculum an understanding of the concept and interdisciplinarity of the Sustainable Circular Bioeconomy.

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<sup>1</sup> An academic discipline or academic field is a subdivision of knowledge that is taught and researched at the college or university level. Academic disciplines are conventionally divided into the humanities, and the scientific disciplines, such as physics, chemistry, and biology; the social sciences are sometimes considered a third category. While academic disciplines in and of themselves are more or less focused practices, scholarly approaches such as multidisciplinary/interdisciplinarity, transdisciplinary, and cross-disciplinarity integrate aspects from multiple academic disciplines, therefore addressing any problems that may arise from narrow concentration within specialized fields of study. (Wikipedia [https://en.wikipedia.org/wiki/Academic\\_discipline](https://en.wikipedia.org/wiki/Academic_discipline))

**The goal of the Colloquium** is to address how such an interdisciplinarity mindset of the Sustainable Circular Bioeconomy should be embedded in the curricula of these Bachelor degree programmes.

The question is posed in terms of the concept of the structure of degree programmes based on the T principle. How to present the interdisciplinarity of the cross bar of the T in a degree programme with the specialisation portrayed by the vertical bar of the T? How should the balance be made between the cross bar and the vertical bar during the delivery of the curriculum? What learning trajectory steps should be made across the curriculum of a Bachelor degree programme to embed the mindset of the Sustainable Circular Bioeconomy in the student's experience?

Bachelor and Master stand-alone Bioeconomy degree programmes are not the focus of this Colloquium but will contribute, through their defined learning outcomes, to the discussion of how to embed the interdisciplinarity of the Sustainable Circular Bioeconomy in specific Bachelor degree programmes.

## **B Colloquium themes**

Framing the challenge, by reviewing the learning outcomes from specific Bachelor and Master Bioeconomy degree programmes and then defining the learning outcomes required to deliver the Sustainable Circular Bioeconomy mindset.

Developing a learning trajectory for delivering the interdisciplinary concept in Bachelor degree programmes, which can contribute to the Sustainable Circular Bioeconomy.

Specific teaching and learning activities to support the development of interdisciplinarity for the bioeconomy, including cooperation with industry, in Bachelor specific degree programmes.

What strategic approaches are required to embed the delivery of this mindset in all Bachelor degree programmes in a life science faculty/ university.

## **C The Colloquium Outcomes will allow delegates to**

Define the overarching learning outcomes for the developing the mindset of the Sustainable Circular Bioeconomy in Bachelor degree programmes underpinning the Sustainable Circular Bioeconomy - for the industry sectors of agriculture, forestry, blue economy, food value chain, biotechnology and the bio-based economy.

Define opportunities and learning activities in the learning trajectory to deliver the learning outcomes of the Sustainable Circular Bioeconomy in the curricula of specific Bachelor degree programmes.

## **D Target Audience**

Degree programme co-ordinators, lecturers, members of committees responsible for the (strategic) development of curricula. National education advisers are also invited to contribute to the discussion.

## E Colloquium Format

Each Session of the Forum theme will be addressed by keynote speakers followed by small round table breakout groups to discuss the issues raised, with a concluding report from the breakout groups of the issues raised in the final session.

## F Outline Programme

### Wednesday 18 May

20.00 *Welcome Reception*, Klein Turkije 20, Ghent,

### Thursday 19 May

9.00 **Welcome and Introduction to the Colloquium** Han van Osch, Chair of ICA-CoP Bio-Edu, and University of Applied Sciences & the Dutch Biobased Knowledge Network

### **Session 1 – Framing the challenge, what learning outcomes should be achieved in order to develop the students’ mindset for the Sustainable Circular Bioeconomy**

9.15 **Keynote: Opportunities and challenges for promoting education and training to provide the skills for the developing bioeconomy**, Giuseppe Pellegrino, Unit Bioeconomy and Food Systems (B2), DG Research & Innovation, European Commission, BE

9.45 **Keynote: Developing competences and skills for Sustainable Circular Bioeconomy to meet the needs of the labour market.** Mona-Anitta Riihimäki, Häme University of Applied Sciences, FI

10.15 Coffee break

10.45 **Keynote: Learning from the planned learning outcomes and curriculum of a BSc Bioeconomy degree programme**, Sebastian Goerg, TUMCS for Biotechnology and Sustainability, Technical University of Munich, DE

11.15 **Keynote: Learning from the planned learning outcomes and curriculum of a MSc Bioeconomy degree programme** Keynote, Antonio Marzocchella, Università degli Studi di Napoli Federico II, IT

#### **11.45 Panel Discussion**

12.30 Lunch

### **Session 2 - Addressing the learning outcomes to be achieved for the interdisciplinarity of the Sustainable Circular Bioeconomy in Bachelor degree programme curricula**

13.30 **Keynote: The concept of developing a learning trajectory across a BSc degree programme for embedding the interdisciplinarity of the sustainable circular bioeconomy.** René van der Burgt, Avans University of Applied Sciences, Breda, NL

14.00 **Case Studies** presentations are invited from the specific Bachelor degree programmes in which the interdisciplinarity mindset for the sustainable circular bioeconomy is developed.

**Remit for a Case Study:** Presentation of a specific BSc degree programme or course, in which interdisciplinary bioeconomy learning outcomes are embedded and delivered through the degree programme curriculum.

15.00 Coffee break

15.30 **Roundtable discussions groups** focusing on the challenge in defining the learning outcomes to be achieved for developing the mindset of the Sustainable Circular Bioeconomy in discipline specific Bachelor degree programme curricula.

16.30 **Report back**

17.00 Closure of day 1

17.15 **ICA CoP Bio-Edu General Assembly**

20.00 Colloquium Dinner, De Abt, Lange Kruisstraat 4, Ghent

## Friday 20 May

### **Session 3 – The Strategic approach for embedding an interdisciplinarity mindset for the Sustainable Circular Bioeconomy across all discipline specific Bachelor degree programmes in a life science faculty/ university**

8.30 **Keynote: A Case Study of a University strategic approach to curriculum development for embedding interdisciplinarity for the Sustainable Circular Bioeconomy across all Bachelor degree programmes.** Charlotte Voigt, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria

9.00 **Keynote: A Case Study of a University strategic approach to curriculum development for embedding interdisciplinarity for the Sustainable Circular Bioeconomy across all Bachelor degree programmes,** Paavo Kaimre, Estonian University of Life Sciences, EE

9.30 **Short Case Study presentations:**

Alternative teaching and learning activities to support embedding interdisciplinarity mindset for the Sustainable Circular Bioeconomy across the curriculum.

Assessment of the staff development needs and delivery to ensure staff are activated to embed the concept of the Sustainable Circular Bioeconomy mindset in their individual courses

10.30 *Coffee break*

11.00 **Roundtable discussion groups**

11.45 **Report back**

12.00 **Closure of ICA CoP Bio-Edu Colloquium**

***Move to the Faculty of Bioscience Engineering, University of Ghent***

12.30 **Plenary Session: Report back from ICA-Edu, ICA-Edu SIG and the ICA CoP**

13.00 *Closure and lunch*

15.30 – 18.00 Guided tour of Ghent (1.5 hours by the Tourist Office guide) followed by beer tasting. This activity requires an extra registration fee on the registration form.

## G Registration

Please complete the online Registration form at <https://forms.gle/tdQ8NVbBNruFirjH7>  
Please also note it is also possible to register for the ICA-Edu Special Interests Group Colloquium on Wednesday 18 May *Putting Assessment of Sustainable Entrepreneurship Education in the Spotlight* [see here](#)

### Registration fee:

275 € for delegates from [ICA-member Institutions](#) and members of [ICA's Standing Committees](#)

325 € for delegates from non ICA-Member Institutions

**Registration fee includes:** Welcome Reception and Walking dinner, 2 lunches, Colloquium dinner, and tea/coffee breaks during the Colloquium

### Registration deadline 4 May 2022

- The date of your registration fee payment will be considered as the date of your registration
- After registration an invoice will be sent by e-mail (.pdf file) by the ICA Secretariat. Please note we do not accept Credit Card payments
- Accommodation is not included in the registration fee - [book your accommodation here](#)

Please make your registration fee payment to

Bank: KBC  
Address of Bank: Brugsesteenweg 513, B-9030 Mariakerke (Belgium)  
Swift code: KREDBEBB  
IBAN: BE41 7370 3345 2010  
Beneficiary: ICA  
Reference: <your family name> ICA-Edu 2022

VAT: BE 0461 925 876

ICA Registered address: Marcus Van Vaernewijkstraat 21, 9030 Gent-Mariakerke, Belgium

## Cancellation policy

If you wish to cancel your registration a full refund will be made of the amount of the Registration Fee if the ICA Secretariat is notified before 1 May 2022 **and the Secretariat has acknowledged your cancellation.** From the 1 May 2022 the registration fee will not be refunded. Contact [ICASecretariat@ica-europe.org](mailto:ICASecretariat@ica-europe.org) to cancel your registration.

## H Book your hotel accommodation

Accommodation is not included in the registration fee. All participants are responsible for booking their accommodation.

**MONASTERIUM POORTACKERE** [www.monasterium.be](http://www.monasterium.be)

Please book this hotel where the ICA-CoP Bio-Edu Colloquium is being held.



We have secured a special deal on the rental of the meeting room so long as delegates book their accommodation here.

The following is reserved until 4 April with breakfast. City tax 3€ per day not included

- Single room: €119 per room per night
- Double room: €134 per room per night

Make your booking through [info@monasterium.be](mailto:info@monasterium.be) quoting: “ICA-CoP conference”

Please be aware that you may achieve better deals online at hotel booking sites.

## I Colloquium committee

**Josef Glössl**, BOKU University of Natural Resources and Life Sciences, Vienna, Austria

**Ingar Janzik**, Forschungszentrum Jülich GmbH and Bioeconomy Science Center, Germany

**Han van Osch (Chair)**, Avans University of Applied Sciences, the Netherlands & Dutch Biobased Knowledge Network

**Mona-Anitta Riihimäki**, Häme University of Applied Sciences, Finland

**George Sakellaris**, Czech Academy of Sciences, Prague & BioEast

**Constantinos Vorgias**, University of Athens, Greece

**Simon Heath**, ICA Deputy Secretary General

## J Questions?

Contact Simon Heath [icasecretariat@ica-europe.org](mailto:icasecretariat@ica-europe.org)