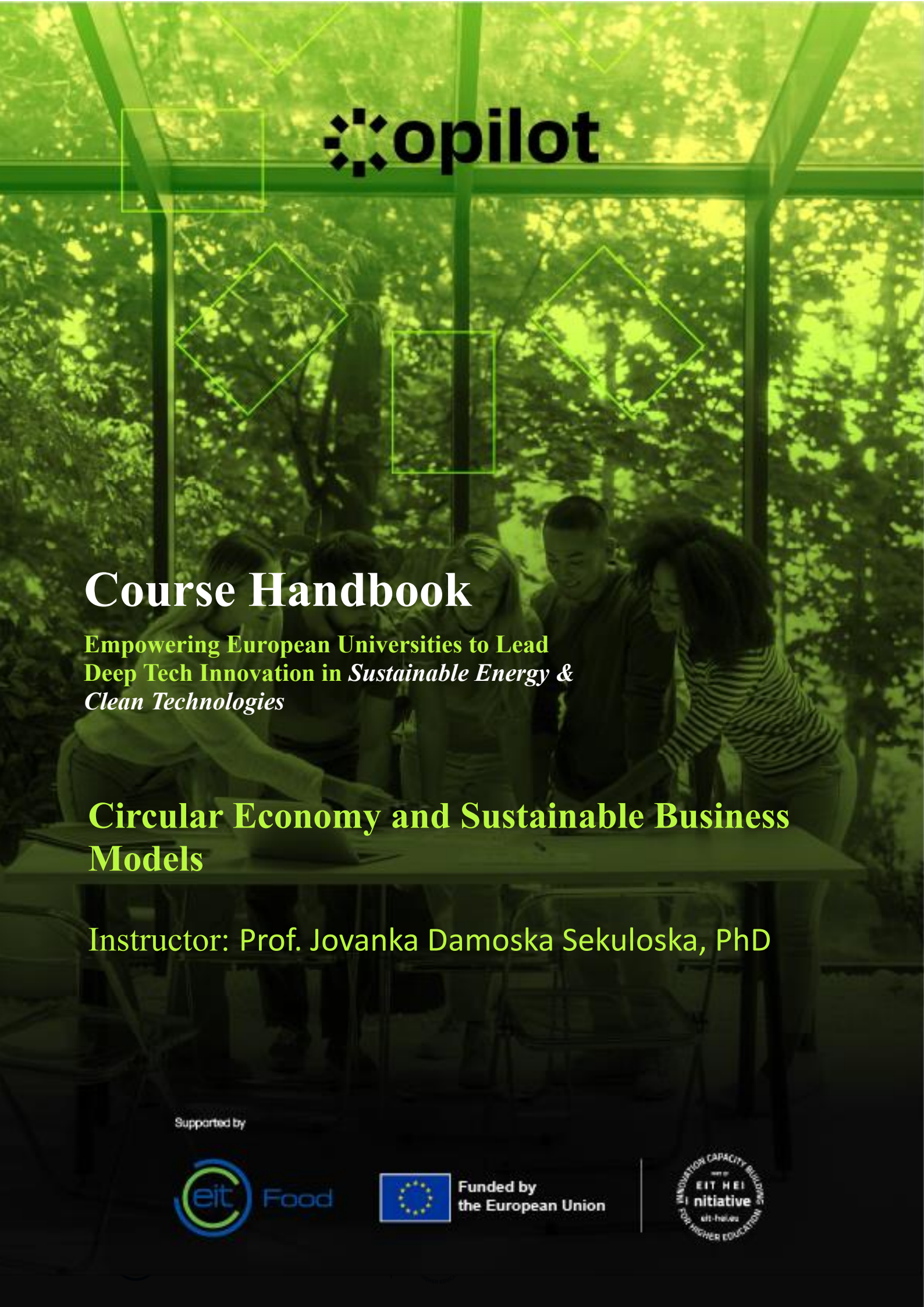


Course Handbook

Empowering European Universities to Lead Deep Tech Innovation in *Sustainable Energy & Clean Technologies*

Circular Economy and Sustainable Business Models

Instructor: Prof. Jovanka Damoska Sekuloska, PhD

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Course Information

Title: ***Circular Economy and Sustainable Business Models***

Instructor**:** Prof. Jovanka Damoska Sekuloska, PhD

ECTS credits**:** 2

Course structure: 5 sessions, 2 lectures + 2 tutorials per session

Mode of delivery: o*nline*

Course Summary

The course explores the principles of the circular economy and their application in developing sustainable, innovative, and competitive business models. It examines the transition from linear production and consumption systems to circular approaches based on resource efficiency, waste prevention, reuse, repair, remanufacturing, and recycling. Students learn to identify circular business opportunities, design sustainable value propositions, and understand the role of circular supply chains, industrial symbiosis, and digital technologies, including artificial intelligence and data analytics. The course also covers the economic, environmental, and social dimensions of sustainability, as well as implementing and evaluating circular business models using appropriate performance indicators. Through practical exercises and real-world case studies, students develop the knowledge and skills needed to propose economically viable and environmentally responsible business solutions.

Course Participants

The course DeepTech Entrepreneurship is designed for a diverse audience of students, researchers, academic and non-academic professionals, and aspiring entrepreneurs interested in transforming scientific and technological innovations into viable business ventures.

Learning Outcomes

Upon completion of the course, participants will be able to:

- Define the concept of Circular economy and sustainability.
- Explain the principles and drivers of the circular economy.
- Distinguish linear, circular, and sustainable business models.
- Identify opportunities for circular value creation and resource efficiency.
- Apply sustainable business model frameworks to real-world business cases.

- Assess the role of digital technologies and industrial symbiosis in enabling circular business practices.
- Propose innovative and economically viable solutions that create environmental and social value.

Assessment

In order for each participant to complete the course successfully and be awarded the corresponding ECTS credits, they must pass the course assessment. The outcome of the assessment can be either Pass or Fail.

Assessment methods

- Project assignment (50%): Identifying opportunities to develop a concept of circular economy
- Circular business model case study (30%): Identifying and presenting a case
- Participation and lecture activities (20%): Active participation and contribution in discussions on course topics and case studies

The link between learning objectives and assessment criteria can be seen below.

Learning outcomes	Assessment examples
• Explain the principles and drivers of the circular economy; • Distinguish linear, circular, and sustainable business models. • Assess the role of digital technologies and industrial symbiosis.	Circular business model case study. Identifying and presenting a case.
• Identify opportunities for circular value creation and resource efficiency; • Apply sustainable business model frameworks to real-world business cases. • Propose innovative and economically viable circular business solutions.	Identifying opportunities to develop a concept of circular economy

Mentoring

In the context of the course, participants will have the opportunity to receive one-to-one mentoring in carrying out their assignment/project.

Bibliography

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7. FISSAC (2018). Key Performance Indicators for Industrial Symbiosis and Circular Economy. H2020 Project Deliverable.
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11. Antikainen, M., Uusitalo, T., & Kivikytö-Reponen, P. (2018). Digitalisation as an Enabler of Circular Economy. Procedia CIRP, 73, 45-49
12. Ellen MacArthur Foundation — Circular economy principles, case studies, and business resources, https://www.ellenmacarthurfoundation.org/?utm_source=chatgpt.com
13. European Commission — Circular Economy policy and initiatives, https://environment.ec.europa.eu/strategy/circular-economy_en

Additional resources for learning about practical issues for Circular Economy

Other Important Information

Course evaluation: Upon successful completion of the course, participants are required to fill in the course evaluation questionnaire.

Certificate: Upon successful completion of the course, participants will be issued a certificate of achievement provided by UIST and EIT Food KIC.

Plagiarism: UIST has explicit rules concerning academic dishonesty, including plagiarism. Course participants are reminded that all work submitted as part of the requirements for any examination (including coursework) of UIST must be expressed in their own words and incorporated in their own ideas and judgements.

Course Timetable

Session	Date and Time	Instructor	Venue
1st	04.11.2026 @17:00	Jovanka Damoska Sekuloska	Online
2nd	09.11.2026 @ 17:00	Jovanka Damoska Sekuloska	Online
3rd	11.11.2026 @ 17:00	Jovanka Damoska Sekuloska	Online
4th	16.11.2026 @ 17:00	Jovanka Damoska Sekuloska	Online
5th	18.11.2026 @ 17:00	Jovanka Damoska Sekuloska	Online

Contact Details of Instructor

Name	Email	Telephone number
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