



**COURSE UNIT DESCRIPTION**

<b>Course Unit Title</b>	<b>INNOVATIONS &amp; BUSINESS MODELS FOR THE CIRCULAR ECONOMY</b>	
<b>Course Unit Code</b>	GD700	
<b>Type of Unit</b>	Elective	
<b>Level of Course Unit</b>	Second cycle	
<b>Year of Study</b>	First/second year	
<b>Semester</b>	On demand	
<b>Number of ECTS Credits</b>	6 ECTS	
<b>Course Unit Objectives</b>	<p>A circular economy is an economic system of closed loops in which raw materials, components and products lose their value as little as possible, renewable energy sources are used, and systems thinking is at the core. A circular economy is fundamentally different from a linear economy. To put it simply, in a linear economy we mine raw materials that we process into a product that is thrown away after use. In a circular economy, we close the cycles of all these raw materials. Closing these cycles requires much more than just recycling. It changes the way in which value is created and preserved, how production is made more sustainable and which business models are used. Innovation is at the heart of generating new business models. Innovation is everyone’s business and no matter what is your job position at the company, you are always expected to do better with less. The realisation of the circular economy requires a fundamental systemic change. This new system also requires new business models. In order to apply the various business models, companies need to gain insight into which business model suits the organisation and is promising for the chain. Design thinking has been recognized as a catalyst to move away from the linear economy approaches to the circular economy models.</p> <p>The objective of this course is to introduce students to design thinking to generate novel circular innovation business models.</p> <p>This elective course enhances students’ competence in the area of green management, building upon the concepts and principles introduced in the core course Green Transformation of Businesses and Organizations and in the elective course The Circular Economy &amp; Sustainable Development. The acquired knowledge will enable students to contribute or lead the green transition at their workplace. Learning in this course will be reinforced by practical application opportunities via case studies and current policy reports.</p>	
<b>Learning Outcomes</b>	On completion of the course the students are expected to be able to:	
	CILO1	Outline the circular innovation principles and how they apply to business
	CILO2	Demonstrate in-depth knowledge of design and system thinking techniques
	CILO3	Apply design thinking techniques to generate novel circular innovation business models and explain the benefits associated with the implementation of circular design
	CILO4	Critically assess the current best practices and understand the challenges associated with the implementation of circular design
<b>Name of Lecturer(s)</b>	Dr Giorgos Dimitriou	
<b>Mode of delivery</b>	Face to Face	
<b>Prerequisites or corequisites</b>	GD400 Green Transformation of Businesses and Organizations; GD600 The Circular Economy & Sustainable Development	

<b>Content</b>	Introduction to innovation. Why innovation is at the heart of generating new business models. Circular innovation principles and how they apply to business.	CILO 1
	Design thinking as a catalyst to move away from the linear economy approaches to the circular economy models. Design and system thinking techniques.	CILO 2
	Applying design thinking techniques to generate novel circular innovation business models. Overview of benefits associated with the implementation of circular design. Business Model Innovation Grid: strategies and cases. Group work in class: design, use and apply business models in support of business problem appraisal and decision making.	CILO 3
	Case studies: current best practices. Understanding the challenges associated with the implementation of circular design.	CILO 4
<b>Recommended or required reading</b>	<p>Lectures, case studies, reports, and other course materials are available via Moodle.</p> <p>Recommended reading:</p> <p>Bocken, N. M. P., Bakker, C., &amp; Pauw, I. De. (2015). Product design and business model strategies for a circular economy. In <a href="#">Sustainable Design &amp; Manufacturing Conference, 12-14 April</a>. Seville, Spain.</p> <p>Boons, F., Montalvo, C., Quist, J., &amp; Wagner, M. (2013). Sustainable innovation, business models and economic performance: an overview. <a href="#">Journal of Cleaner Production</a>, <i>45</i>, 1–8.</p> <p>Business Model Innovation Grid: 8 Strategies and 100 Cases. <a href="https://www.vlaanderen-circulair.be/bmix/">https://www.vlaanderen-circulair.be/bmix/</a></p> <p>Jonker, J., &amp; Dentchev, N. (2013). Business Modeling for Sustainability: Identifying five modeling principles and demonstrating their role and function in an explorative case study. In <a href="#">Proceedings for the 8th European Conference on Innovation and Entrepreneurship: ECIE 2013</a>. (pp. 340–346). Academic Conferences Limited.</p> <p>Joyce, Paquin, &amp; Pigneur. (2015). <a href="#">The triple layered business model canvas: a tool to design more sustainable business models</a>.</p> <p>Mentink, B. (2014). <a href="#">Circular business Model Innovation</a>. Technical University Delft.</p> <p>Circular Economy business models explained <a href="https://www.boardofinnovation.com/circular-economy-business-models-explained/">https://www.boardofinnovation.com/circular-economy-business-models-explained/</a></p> <p>Knowledge Map – Circular economy (n.d.) <a href="https://kenniskaarten.hetgroenebrein.nl/en/knowledge-map-circular-economy/what-is-the-definition-a-circular-economy/">https://kenniskaarten.hetgroenebrein.nl/en/knowledge-map-circular-economy/what-is-the-definition-a-circular-economy/</a></p> <p>Jordan, N. (2020). Eco-Innovation and Digitalisation. Case studies, environmental and policy lessons from EU Member States for the EU Green Deal and the Circular Economy.</p>	

	<a href="https://ec.europa.eu/environment/ecoap/about-eco-innovation/policies-matters">https://ec.europa.eu/environment/ecoap/about-eco-innovation/policies-matters</a>
<b>Planned learning activities and teaching methods</b>	Lectures; in-class discussion and debates; in-class exercises; problem sets; team work; case studies, team presentations, interactive online learning via Moodle (quizzes, assignments, forums)
<b>Assessment methods and criteria</b>	Class Participation: 10% Group Work in class: 20% (case studies) Final Assignment: 70%
<b>Language of Instruction</b>	English
<b>Work Placement(s)</b>	Not applicable