Libera Università Internazionale
degli Studi Sociali Guido Carli

LUISS

Syllabus

Academic Year	2021/2022
Program	Law, Digital innovation and Sustainability
course	Management of Circular Economy
Term	I semester
Year	2
SSD	
Credits	6

INSTRUCTIONAL GOAL	This course provides a business and managerial bases for the development of circular economy activities. The course welcomes students with different backgrounds interested in understanding the how a circular model approach could increase the sustainability of organizations. The circular economy course introduces the circular economy from a theoretical and practical prospective. The first part will provide an overview of how the circular economy could be a new paradigm and provide a new model that refuses the current production-consumption mode and the necessity of continuous growth. Hence, the first part will linger on the limit of the current economic model and the consequence of keep on going with the consumeristic approach. In a second moment, the course will introduce a new economic model, based on the circular economy. The course will also introduce an approach specific within the organization and how a linear production process could be transformed with the adoption of a closed-loop. Hence, the circular economy production model foresaw a structure in which at least some of the raw material comes from the wastes of another production process. The circular economy if correctly applied could be a source of efficiency thanks to the management and use of resources. An additional objective of the course is to provide a view of a circular economy as a business model. The circular model could support firms to find a competitive advantage thanks to the re-use of products. As an example, the use of waste as raw material could reduce the cost of production, making the product prices competitive. This model will also support the organization to develop a more sustainable and ecological society. The last goal of the course is to provide a vision of a circular economy in relation to urban waste. In particular, on how the circular economy should develop collaboratively including different players, such as firms, associations, local authorities, universities, and citizens. Hence, the circular economy could support a vision of balance and harmony between the economy, the environment, and society.
INTENDED LEARNING OUTCOMES	**Knowledge and understanding:** By the end of the course, students should be able to: • students will learn to understand and support circular economy initiatives. • students will have an overview of the main dynamic related to the circular economy and sustainable issues. • students will be able to define new business ideas of circular productive systems. **Applying knowledge and understanding:** Upon completing the study program, students will be able • Students will learn to use a multidisciplinary approach and apply their knowledge to reach collaborative solutions based on circular economy. • Students will learn a systemic way of thinking which supports their understanding of complex situations. This will support them in the problem-solving of complex issues. • effectively communicate and work, as an expert in circular economy issues. **Making judgements:** Upon completing the study program, students will be able to: • present an informed scientific opinion in the public debate concerning the linear and

	circular economy. • gather and interpret information and data from different sources, in order to make judgements in an independent way; • prepare original research supported by relevant bibliography and data analysis and debate different perspectives to address the issue. **Communications Skills:** Upon completing the study program, students will be able to: • develop the ability to communicate in written form through completing the assignment and oral form through the final presentation of the case studies and the class debate; • use the notions and the communication of circular economy and sustainability. • foster the development of relational skills in international and multicultural settings; **Learning skills:** Upon completing the study program, students will be able to: • build an analytic toolbox from the analysis of complex economic process which involve the application of a new circular model: • solve problems in dynamics settings and develop critical positions. This ability will be acquired through: class participation, class debate, and research carried out for the drafting of the written assignment.
Pre-requisites	Good knowledge of English is required (oral and written). Compulsory course attendance.
Course content	The course is divided into two main parts. The first one aims to understand the direct effect that applying a circular model approach could have on the organization of the firm, its way to create value and the definition of its business model. The second part aims to understand the circular economy as a wide economic model. In particular, the course will analysis which are the consequence of this model on the macro indicators and to understand if a different view of the economic paradigm is possible. Topics that will be covered by this part of the course include the following: • Defining circular economy • Describing the risk of a linear productive line • Circular economy as a new economic paradigm • Using waste as a resource • The benefits of circular economy on the environment • Circular economy as a business model • From consumer to producer • Collaboration for the creation of the resource circle • Circular economy in the city The first part will provide an overview of key definitions and terminology in science, technology, and management of the circular economy and the current emergency linked to a circular line of products and the consequences in the short, medium and long term. In this part, it will then be introduced to the circular economy as a new economic system, which puts at its core different indicators and objectives compared to the consumeristic approach. The second part will explore how the circular economy will impact the management and development of organizations. In particular, the second part will focus on the opportunity, but also the limitations, of the use of secondary resources. The benefits of a different approach to waste management will be stressed. The course will underline how the development of circular economy activities will improve the environment, the social conditions and support to reach the SDGs. The third part will also examine the role of the circular economy on the organizations, but it will focus on a business-oriented approach. Hence, this part will focus on how applying the circular

	economy on a firm's business model and understand how this change could facilitate or not the positioning of the firm's product. In the third part, the role of the consumer and the possibility of its transformation to producers will be studied. The fourth part of the course comes to analyze how the creation of an ecosystem could support the application of the circular economy to a broader perspective. In this part, the students will analyze the importance of collaboration, the necessity of different types of actors, and the creation of a network to support efficient circular use of the resources. In the last analysis, the city would be taken as a scope of analysis, and the management of urban waste will be taken into consideration.
Reference Books	The analysis of very recent or current issues means that it is impossible to refer to a specific textbook. The slides, referring to a given lesson, will be made available to students in advance. However, in order to have a general and analytical view on the economic workings of innovation, students can refer to: Stahel, Walter R. "The circular economy." Nature 531.7595 (2016): 435-438. Tukker, Arnold. "Product services for a resource-efficient and circular economy–a review." Journal of cleaner production 97 (2015): 76-91. Lieder, Michael, and Amir Rashid. "Towards circular economy implementation: a comprehensive review in context of manufacturing industry." Journal of cleaner production 115 (2016): 36-51. Kirchherr, Julian, Denise Reike, and Marko Hekkert. "Conceptualizing the circular economy: An analysis of 114 definitions." Resources, conservation and recycling 127 (2017): 221-232. Geissdoerfer, Martin, et al. "The Circular Economy–A new sustainability paradigm?." Journal of cleaner production 143 (2017): 757-768. Geng, Yong, et al. "Measuring China's circular economy." Science 339.6127 (2013): 1526-1527. Hazen, Benjamin T., Diane A. Mollenkopf, and Yacan Wang. "Remanufacturing for the circular economy: An examination of consumer switching behavior." Business Strategy and the Environment 26.4 (2017): 451-464. Murray, Alan, Keith Skene, and Kathryn Haynes. "The circular economy: an interdisciplinary exploration of the concept and application in a global context." Journal of business ethics 140.3 (2017): 369-380. Planing, Patrick. "Business model innovation in a circular economy reasons for non-acceptance of circular business models." Open journal of business model innovation 1.11 (2015). Bocken, Nancy MP, et al. "Product design and business model strategies for a circular economy." Journal of Industrial and Production Engineering 33.5 (2016): 308-320. Ma, Shu-hua, et al. "Mode of circular economy in China's iron and steel industry: a case study in Wu'an city." Journal of Cleaner Production 64 (2014): 505-512. -Students are expected to read the papers/articles assigned each week
Teaching Methods	Slides will be available before the lesson covering each of the specific topics addressed in the course. Hence the presentations would include theoretical explanation of the main phenomena part of the course. Additional to the theoretical components, a cases study for each of the session will be presented. The case will describe real experiences implementing circular economy projects. The cases, which students will need to read in advance, will support the in class debate. In addition, also an inspirational speech is foreseen (name to be defined) .
Assessment	The assessment of students learning will be centered on a written exam constating in a brief paper (50% of the final grade) in which students will need to answer to open questions for each of the

sessions. Besides, students will be divided into groups, which will be assigned to a specific case. The group will need to analyze the case and present it to the class during the course. The presentation, together with the participation in class, will be 50% of the final grade. The student presentations of the cases will be a maximum of 15 minutes. Students will ask to moderate the discussion with the other students after the presentation of the case.