

Department :	Management and strategy
Area of expertise :	Logistics, International Trade and Information Systems
Level :	Master
ECTS credits :	3
Hours of instruction:	24 h
Personal work:	51 hrs
Language(s) of instruction:	French

Programme(s) and year(s) of study :

- MSc - Fall
- MSc - November

Semester or year :

- Semester 10

COURSE LEADER

Dominique BONET FERNANDEZ

d.bonet-fernandez@ipag.fr

COURSE DESCRIPTION

Digital learning with 20 asynchronous hours and 4 synchronous masterclasses

Today, economic growth depends primarily on increasing resource consumption. In this linear economic approach, companies harvest or extract materials, use them to grow or make products, and then sell these products to consumers. The waste materials are then burned or landfilled. As the population grows and resources become scarce, this 'extract-produce-discard' approach is rapidly reaching its limits. Many argue that the time has come to explore this 'circular economy' concept further, to analyse its promise for businesses and economies and to lay the groundwork for its adoption. Increasingly attracting attention, the circular economy philosophy is an emerging field of study that favours a systemic and transdisciplinary approach. The circular economy is an economy that is restorative and regenerative in nature, and aims to keep products, components and materials at their highest utility and value at all times. It is also a new economic model for distributing resources equitably without harming the functioning of the biosphere. It decouples economic growth from resource consumption. Attracting increasing attention, the circular economy is an emerging field of study, which favours a systemic and interdisciplinary approach. In this course, we will cover the latest developments in both research and management of the ecological and circular transition.

CONTRIBUTION TO THE LEARNING OBJECTIVES OF THE PROGRAMME

- 22_LO_MSC_ETHIC1 - Students will be able to identify issues of social responsibility, sustainable development and ethics.
- 22_LO_MSC_SOLV1 - Students will be able to identify and characterise current business issues.
- 22_LO_MSC_SOLV2 - Students will be able to propose managerial recommendations based on a sound empirical study.

COURSE OBJECTIVES

Knowledge

1. Explain the link between the economy and environmental sustainability: in particular, how today's linear economy contributes to increasing pressure on limited material resources
2. Learn why circular economy concepts have recently received increased interest, even though the circular economy philosophy is based on long-standing schools of thought.
3. Understand and critically reflect on the most common and least discussed aspects of the principles of the circular economy.
4. Understand how the "whole is more than the sum of its parts" in a system and why the simple optimisation of one area (e.g. product design) can lead to unexpected results.

Competencies

5. Develop your own beliefs about 'what it will take' to move stakeholders in companies, organisations and communities to the right place.

governments and citizens from an initial interest in circular economy ideas, to actively co-creating a global circular economy

6. Increase your experience and confidence in exploring and connecting with international businesses and supply chain management

7. Use analytical tools and indicators to monitor the company's economic, environmental and social performance.

TEACHING METHODS

Lecture, Case study, Group presentation, Group work, Videos

EVALUATION

Learning objectives	Course objectives	Evaluation method	Percentage	Description
	1-2-3-4-5-6-7	E-learning activities	100 %	

BIBLIOGRAPHY

Required reading

Lazzeri, Y., Bonet Fernandez, D. and Domeizel, M. (coord.), (2017), "Circular economy and sustainable territories: which principles and tools?" Aix-Marseille University. Presses Universitaires de Provence Fromant E, (2012), Les clés du renouveau grâce à la crise: économie de fonctionnalité: mode d'emploi pour les dirigeants d'entreprise. EMS-Editions.

Fromant E, (2021), L'économie circulaire pour les Nuls, Decitre.

<https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf>

Buttin (2015), Activating the Circular Economy: Reconciling Economy and Nature, E-book available on IPAGORA Documentation Centre:
<http://web.b.ebscohost.com/ehost/ebookviewer/ebook/bmxlYmtfXzExMDc3NDIifX0FO0?sid=6629fda0-9257-390744f54453@pdc-v-sessmgr03&vid=1&format=EB&rid=1> 6271-4777-

Recommended reading

<https://www.linkedin.com/learning/learning-design-for-sustainability/the-circular-economy?u=101753706>

Bonet Fernandez, I. Petit, Lancini, A., (2014), The circular economy: what measures of economic, environmental and social performance?", Revue Française de Gestion Industrielle (RFGI), Vol 33, n°4.

Bonet Fernandez, D., (2020), MOOC Urban Agriculture, chapter "Circular Economy", Agronomic, Veterinary and Forestry Institute of France Agreenium and Les Cols verts. April. Stuchtey, M., Enkvist, P.-A., & Zumwinkel, K. (2016). A Good Disruption: Redefining Growth in the Twenty-First Century (1st edition). Bloomsbury Business.

<https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf>

<https://sustainabledevelopment.un.org/content/documents/2149Impact%20Transforming%20Business.pdf> Webster, K.

COURSE PLAN

Session 1

Introduction to the Circular Economy / Course Overview We will begin to explore the limits of our current linear economy. We will discuss the risks of continuing on the current trajectory and begin to explore what an alternative (a circular economy) might look like.

Session 2

The circular economy at city and regional level Cities will be home to the vast majority of the world's population by 2050. We will discuss how circular economies could be created in cities and regions, including the idea of industrial symbiosis, where the 'waste' of one industry becomes raw materials for an entirely different industry. As a malleable concept, the circular economy is emerging as one of the new paradigms to be integrated into the field of urban planning.

Session 3

The circular economy at city and regional level. Through the experiences of metropolises such as Paris, Montreal or Singapore, initiatives related to this "new economy" are taking place within the territories. We will set out the theoretical and practical issues at stake through an examination of the typology of projects, the multiplicity of actors and the logic of their development. Several case studies will be presented.

Session 4

How will we know we are moving towards greater circularity? We will review the indicators and measures of the circular economy, not only at the level of materials and products, but also at the level of companies, cities and countries. Chapter 3 is dedicated to the circular economy and its indicators. Today, the crisis has become ecological and the wealth accounting of countries and companies must be reinvented.

Any action or economic activity must be evaluated and measured. Not only for its economic impact, but also for its social and environmental impact. The current health and economic crisis makes a serious debate on the place of a demanding ecological transition in future recovery plans inevitable. Now, directly situated at the heart of our modes of organisation and production, accounting appears to be one of the most relevant and strategic tools for structuring it, implementing it and evaluating its effectiveness. It is on these measures that this course is based.

Session 5

Business models for the circular economy and the smart city

The circular economy aims to change the paradigm of the so-called linear economy by limiting the waste of

This is achieved by reducing resource consumption and environmental impact, and by increasing efficiency at all stages of the product economy. Many business models are emerging, through collaborative platforms, apps or the functionality economy.

Session 6

More: Business models for the circular economy and the smart city

The circular economy philosophy encourages a rethinking of business models, including offering products 'as a service' instead of selling products and transferring ownership to consumers. We will explore some of the opportunities and challenges of these circular business models on an international scale.

Session 7 Case study

Session 8

In this chapter on the supply chain for a circular economy we will look at the circular economy from the perspective of flows, logistics and transport in a "CSR" approach to the supply chain. To create a circular economy capable of meeting these demands in a context of resource scarcity, it is not enough to create recycled products.

A circular economy will require a system for managing incoming and outgoing flows, setting up supply chains and reverse logistics that are equal to the sustainable challenges.

Session 9

Supply chains and the circular economy (continued). Technical cycles include the reuse, repair and recycling of products, parts and materials. This chapter will examine how these cycles are sometimes more difficult than the initial production and shipment of the product, and discuss the difference between closed and open loop material flows.

Session 10 Case study

Session 11

Technology and the circular economy. Recent technological developments have increased the potential for a circular economy to emerge. This chapter will explore various technologies that can increase circularity, such as the Internet of Things (IoT) and additive manufacturing (3D printing). In this chapter we will look at how the smart city can contribute, through these application models, to the circular economy.

Session 12

In this concluding chapter, we will see how the smart city of the future can contribute, through these application models, to the circular and frugal economy. Cities will contain the vast majority of the world's population by 2050. We will discuss how circular economies could be created in cities and regions, including the idea of industrial symbiosis and frugal economy for a sustainable production system by 2050.