

CI-YOU Training Curriculum for youth Leaders

ILIMP Cioventù in risalta

February 2022





Target groups

About 10 - 15 years ago it was usual to discuss that the circular economy is about preparing students for the jobs that don't exist yet, while the future is now. Jobs of circular economy exist, and as a business there are a lot of opportunities, besides the public sector opportunities too

The Circular Economy is a broad and currently technical concept which calls for a paradigm shift in the way businesses, services and society are steered. It has the potential to open new and innovative career prospects for young people, plus create a cleaner, less wasteful society. What is more, young people have the potential to be catalysts and pioneers of this change.

European Governments have been always keen to explore the thoughts, views and insights of young people in the development of Circular Economy, expanding their messages about the circular economy to young people across our countries.

Here you can put all information you have about questionnaires with young people across 8 countries

Objectives of the course

- This course introduces the student to the basic concepts of the circular economy, and provides an opportunity for hands-on learning on these topics.
- Classes will combine theoretical content and hands-on team work on a project. The team project will indeed be the cornerstone of the course: students will work on innovative solutions for the circular economy taking into account technical consideration and business model design.
- During the course students will learn how to apply the principles of the circular economy to real cases and develop skills such as creativity, systems thinking and teamwork.

General outcomes of the course

- At the end of the course the student must have achieved the following outcomes:
- Understand the context, the challenges and the opportunities of the circular economy
- Get insights and inspiration from real examples of the circular economy
- Propose a business model for the circular economy considering technical, economic, social and environmental aspects and apply some tools for business model design
- Engage in collaborative dynamics for team work

Outcomes for participants

- Increased confidence, a sense of empowerment and raised aspirations
- Development of new skills and experience
- Greater awareness and understanding of policy development and decision-making processes
- Increased access to information, resources and activities on the circular economy

Outcomes for governments of 8 countries in the project

- Visions from groups of young people of the circular economy in action
- Thoughts and ideas from young people on how to achieve their vision
- Increased confidence in how to involve young people
- Increased meaningful engagement with young people





• Overall skills knowledge and competences

Skills to gain on:

- Employing (using) politic, economic, legal, social and cultural environment needed for an active circular economy.
- Flexibility of business operations.
- Building business models
- Operating under a competitive world situation

Knowledge to build on:

- Circular economy, business management and firms' operations.
- Institutional and legal setting.
- Production and manufacturing systems.
- Environmental and sustainability technologies.
- Business models

Competencies to create on:

- Being able to orient individually and as a society towards environmental policies, circular economy, environmental technologies, etc.
- Being able to apply new methods and theories, having versatility to adapt to new environments.
- Being able to solve problems with initiative, decision, creativity, and critical reasoning; and to communicate and transfer knowledge, abilities and skills, understanding the ethical and professional responsibility.
- Being able to analyze and assess the social and environmental impact of technical solutions.
- Being able to work in a multidisciplinary environment.

Methodology

- Theoretical content: the instructor will introduce some background and relevant frameworks to understand key contents.
- Real cases: key concepts will be illustrated using real-life examples and case studies, which can also become a source of inspiration for students' projects.
- Tools & techniques: the instructor will introduce some key tools and techniques from design thinking and entrepreneurship that can be useful for developing the projects: brainstorming, idea selection, business model design, etc.
- Hands-on learning: we will have some guided dynamics in class to encourage students' participation and engagement, and time for team work on the projects applying the tools and techniques explained in class.
- Individual research: students will be encouraged to do research on their own, both to deepen the understanding of the concepts and methods discussed in class and to discover new resources, related concepts and inspiration for their projects.
- Team project: students will have to work on their projects out of the classroom. Team project is the cornerstone of this course: it is here where students should demonstrate their understanding of concepts and their ability to propose innovative solutions, in a process of co-creation and co-learning. The instructor will guide this process and be available for addressing the questions of students.





The macrostructure of the syllabus followed by constructing a business model

No	Topic	Issues of the topic
1	Introduction on circular economy	The origins of the circular economy
		• Fundamentals of the circular economy.
		Understanding circular economy
		The case for the circular economy
2	A framework to understand the	• Exploring global socio-environmental pressures &
	circular economy	their connection to the linearity of our
		production-consumption system.
		Difference between Circular economy and Linear
		Economy
		Positive and negative aspects of linear economy
3	Circular strategies, and business	Circular strategies
	models with real examples	Optimizing asset value
		• Strengthening supply chain relationships to build
		resilience
		Decoupling economic opportunity
		Regenerating the natural environment
		Business models
		The art of business process modeling
		• Examples of business models
4	Material /energy cycles in the	Material cycles in the biosphere
	biosphere	Energy cycles in the biosphere
5	Biomimicry -nature as an inspiration	Biomimicry
	for solutions	The Biomimicry Design Toolbox
		Dematerialization of products
		Optimization
		Digitalization
		Servitization
		Nature as an inspiration for solutions
		Design out waste and pollution
		 Keep products and materials in use
		Regenerate natural systems"
		• Production, distribution, consumption, Reuse,
		Repair,
		Recycle, recycling sector, etc.,
6	Circular economy life cycle	• LCA
	assessment	LCA & relations with CE
		Life cycle regulatory trends
		Regulatory trends on Pharmaceutical industry
		Regulatory trends on Food technology
		Regulatory trends on Agriculture
		Regulatory trends on Tourism
		Regulatory trends on minerals and Fossil Fuels
		• Regulatory trends on Waste Management and
		Recycling
		Regulatory trends on Preserving Nature





		• Etc.,
7	Eco - design	 Seven principles of ecological design: The need to meet the inherent needs of humans and their economy The requirement to sustain the integrity of the structure and function of both natural and managed ecosystems The appropriateness of emulating the inherent designs of nature in anthropogenic management systems The need to make progress to a sustainable economy through greater reliance on renewable resources and more focus on recycling, reusing, and efficient use of materials and energy The use of ecological economics (or full-cost accounting) to comprehensively take resource depletion and environmental damage into consideration and thereby address issues of natural debt The need to conserve natural ecosystems and indigenous biodiversity at viable levels The desirability of increasing environmental literacy to build social support for sustainable development, resource conservation, and protection of the natural world
8	A critical view on circular economy	 Theoretical considerations Political considerations Economic considerations Technical considerations Practical considerations Transparency on circular economy

Project work related to business model

The contents of the course will be explored at a practical level in class, working progressively in teams to develop a business model that can contribute to the circular economy.

Hands-on learning, and learning from project-related discussions and interactions, thus becomes an essential part of the course.

The project also gives the students the opportunity to engage with methodologies such as design thinking and develop soft skills related to problem solving, creativity, system thinking and teamwork.





Steps to follow for project and business model construction

Explore

Define by uncovering the issues through gathering insights and ang genuine experiences from/by young

Create

Generate ideas and co/produce solutions from/by young

Reflect

Consider the future impact and sustainability of the ideas produced

Recommend

Produce influential ideas / solutions with young people

Implement

Implementation of ideas with young people

Through the co-design process, young people have ownership of what they have to say; relating their views and opinions on a particular subject or policy area to deliver ideas and solutions in a spirit of co-design and collaboration.

The problem

Our population is growing across the world and we continue to consume more and more of the world's natural resources to support the demands of growing economies. In the current economic system we TAKE, we MAKE and then we DISPOSE. However, this model is damaging to our world which will ultimately lead to long term negative impacts on the social, commercial and political landscapes in which we live and work together. For societies to thrive within the world, not just survive in the short term, we need an economic system which provides people with jobs, services and well-being for them and their families.

The challenge

How would you solve the problem? Can we rethink and redesign the entire system so that we prosper in a world with a growing population? What would need to change to make that happen? Product design? Transport solutions? Government policy? Education? The way in which we use and consume goods?

Young people in (name of the country) can be the pioneers of change through challenging the way we think about how a country could work in the future.

We want you to create a vision for this new way for society to operate by 2040. You can think about the impacts of your vision on the following areas including:

- Employment opportunities
- Government Policy
- Education & Culture
- Product/service design and Industry Innovation
- Prosperity without growth that damages communities
- How we communicate this new system
- The natural world





Main themes identified by the IO1:

- Design
- Repair
- Reuse
- Remanufacturing
- Recycling
- Climate change
- Skills

Below are three examples how instructors should advise and suggest to students to prepare their project work and business modeling.

Variant 1

Instructors deliver the exercise of Group 1 to all students and expect results. After this, deliver the exercise of Group 2 to all the class and expect results, and after this, split the class in 3-4 groups based on businesses to build the model

Variant 2

Instructors split the class in three groups and deliver to each group the exercise of Group 1, Group 2 and Group 3.

The most recommended is the variant 1 for a class with less than 20-25 students, while the variant 2 is recommended for classes with more than 25 students, which can be split in three groups, or if the class is between 30-40 students, during seminar hours split the class in two groups and both groups follow separately Variant 1

Group 1

Vision

This group should be focused on a Tax system reform which aims to change the flow of the monetary system and re-emphasise where the nation's tax profits come from. Their inspiration should come from the "ex- Tax" System which taxes resources over labor which would encourage businesses to see the value in resources and therefore waste less. They should propose a sustainably democratic system by establishing a Circular Economy research body which will feed into a dedicated government agency that will lobby policies, regulations and legislation such as; embedding the Ex-Tax system; a ban on planned obsolescence; a ban on excessive packaging; and a waste deposit scheme.

Approach

Their "radical" proposal should call for a complete system reform. However, the group clearly should acknowledge and outline the challenges inherent in such a process. They should demonstrate the effectiveness of a top-down approach by using the example of 'Carrier Bag Levy' as an instant and powerful means to instigate change. Their process should begin with a large-scale consultation and education strategy of which Government bodies (local and national) would implement. Business would be regulated to accommodate this new approach. Country would then act as an exemplar economic model for other countries to follow.



Benefits

The group should identify numerous benefits of the system which included businesses, society and the environment. They thought in-depth about how businesses will be encouraged to waste less whilst still remaining profitable. This would be a catalyst for change at a society level by changing how we perceive resources. There will be greater employment, new industries and Country pioneers can become leaders in the international arena.

Group 2

Vision

This group's vision might be the concept of 'Circul8' which is a program that focuses on education and cultural transformation with an overall aim to increase job prospects and employability. Their education vision should include drawing upon the impacts of Eco Schools by developing a secondary school enterprise program focused on the Circular Economy, whilst launching a nationwide Circul8 educational tour bus. To kick start a cultural revolution the group created the 'Circul8 Challenge', which uses a 'crowd-knowledge' sourced web platform. Here, clusters of people can share their expertise and pitch a circular economy enterprise idea to win 100Euro. The winning Circular Economy piloted projects will build upon a Circul8 best-practice think tank.

Approach

The group should start by focusing on the current societal arena and identify the importance of employability given that people are motivated by their ability to support themselves and their families. They should advocate the idea of using best practice examples such as mentioned at the macrostructure of the syllabi in order to spread the Circul8 concept at a community level. Their model should follow a logical progression from community into local businesses, where the successful piloted projects would then be up-scaled to incorporate larger, more influential brands as a way to shift this practice into mainstream culture.

Benefits

They should feel that if businesses are involved, cultural change can happen much more quickly, given the societal influence the businesses have on our consumer behavior. There could be new job-providing industries as a result of the enterprising ideas coming forward from the platform, such as re-manufacturing jobs, design opportunities and swap shops. This growing body of expertise would ensure that there is a better use of resources whilst maintaining a system that supports its citizens.

Group 3

Vision

Should be focused on revolutionizing the food (any other industry as per the conditions of the country) industry as they saw this as an area with the biggest consumer interest. Their vision should aim to change the food (or any other industry) industry on three levels; through the introduction of an entirely new farming system following Permaculture principles; the concept of zero-packaging supermarkets; and food-related community empowerment through community food centers.

Approach

The group should began by addressing how society is now and how the current systems of



farming (or any other public / private business activity) are damaging the eco-system. They also should identify the power that supermarkets have in how we purchase and consume our food products. They should present three new logic models for farming, supermarkets and the community. They should suggest ideas about how each new system can be implemented and integrated into the current system, by giving positive examples such as refillable food containers, package distribution, incentives, social enterprise and urban farming.

Benefits

They should explain clear environmental benefits of taking this approach, such as protecting our eco-systems and our soils for future crop yields. They should feel this as an overall better use of community and farm land given the damage caused by current agricultural practices. The supermarket model would greatly reduce the landfill produced by the packaging created for our supermarket shelves. In addition, they should feel that by creating community food hubs could empower communities to create income from their own food production and educate others into the concept of the Circular Economy at a food level.

Assessment activities	Assessment criteria	WEIGHT
Active participation in class	Questions and comments in class, and active engagement in the proposed activities Activities' outcomes	10%
Assignments	Meeting the assignment Original and critical analysis Evolution of ideas	15%
Final project	Degree to which students apply what they have learned to the analysis of a real situation Degree of innovation of the proposed solution Ability to present and communicate the solution	35%
Final test	- Understanding of the key concepts explained in class	40%

Assessment criteria

Grading will be based on:

- [10%] Active participation in class
- [15%] Assignments
- [35%] Final Project
- [40%] Final test

The following conditions apply to pass the course:

A minimum overall grade of at least 5 over 10 (being 0 lowest and 10 highest) Extraordinary session:

• [50%] Retake exam





• [50%] Revised version of the project

SUMMARY OF THE STUDENT'S EXPECTED WORK HOURS				
Class hours				
Lectures Practical work				
30				
Individual and Team work hours				
Individual research / work	Teamwork / project			
40	18			
Hours in the class 45				
ECTS Credits 4			Hours of individual work 58	
			Total 103	

Target groups

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Outcomes for governments of 8 countries in the project

- Visions from groups of young people of the circular economy in action
- Thinking and ideas from young people on how to achieve their vision
- Increased confidence in how to involve young people
- Increased meaningful engagement with young people
- overall skills knowledge and competences

Skills to gain on:

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- Flexibility of business operations.
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- Operating under a competitive world situation

Knowledge to build on:

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- Being able to work in a multidisciplinary environment.

Methodology

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- Real cases: key concepts will be illustrated using real-life examples and case





- studies, which can also become a source of inspiration for students' projects.
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4	Material /energy cycles in the biosphere	 Material cycles in the biosphere Energy cycles in the biosphere 		
5	Biomimicry -nature as an inspiration for solutions	 Biomimicry The Biomimicry Design Toolbox Dematerialization of products Optimization Digitalization Servitization Nature as an inspiration for solutions Design out waste and pollution 		





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		 Keep products and materials in use
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		• The appropriateness of emulating the inherent
		designs of nature in anthropogenic management
		systems
		• The need to make progress to a sustainable
		economy through greater reliance on renewable
		resources and more focus on recycling, reusing,
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		• The use of ecological economics (or full-cost
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		• The need to conserve natural ecosystems and
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Project work related to business model

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Renefits

They should felt that if businesses are involved, cultural change can happen much more





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Vision

Should be focused on revolutionizing the food (any other industry as per the conditions of the country) industry as they saw this as an area with the biggest consumer interest. Their vision should aim to change the food (or any other industry) industry on three levels; through the introduction of an entirely new farming system following Permaculture principles; the concept of zero-packaging supermarkets; and food-related community empowerment through community food centers.

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Assessment activities	Assessment criteria	WEIGHT
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ECO	NOMY
Y	DU

Final project	Degree to which students apply what they have learned to the analysis of a real situation Degree of innovation of the proposed solution Ability to present and communicate the solution	35%
Final test	- Understanding of the key	40%
	concepts explained in class	

Assessment criteria

Grading will be based on:

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Individual research / work Teamwork / project			
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Hours in the class 45			
ECTS Credits 4			Hours of individual work 58
			Total 103



