

DOI-OPT-439 Circular economy and eco-industry

SEMESTER: Spring
CREDITS: 3 ECTS (2 hrs. per week)
LANGUAGE: English
DEGREES: IEM, ITL

Course overview

This course will introduce key concepts on circular economy and eco-industry, and provide an opportunity for hands-on learning on these topics. Classes will combine theoretical pills, case studies, tools and techniques for idea generation and business model design, and 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 considerations, business model design, and supply chain design.

Prerequisites

There are no particular prerequisites to take this course.

Course contents

Theoretical pills

1. the case for the circular economy
2. influencing schools of thought
 - 2.1. cradle to cradle
 - 2.2. biomimicry
 - 2.3. industrial ecology
3. framework for analysis: the butterfly diagram
 - 3.1. biological cycle
 - 3.2. technical cycle

Case Studies & Inspiration

1. Interface inc.
2. Black bear carbon
3. Precious plastic... & many more

Tools

1. business model canvas
2. eco-design cards
3. design thinking techniques

Skills

1. systems thinking
2. team work
3. creativity

Grading

Grading will be based on:

- [10%] Quiz (or quizzes) on key concepts
- [20%] Participation in class
- [20%] Project-related assignments
- [50%] Final project

The following conditions must be accomplished to pass the course:

- A minimum overall grade of at least 5 over 10.
- A minimum grade in the final project of 5 over 10.