

## 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.