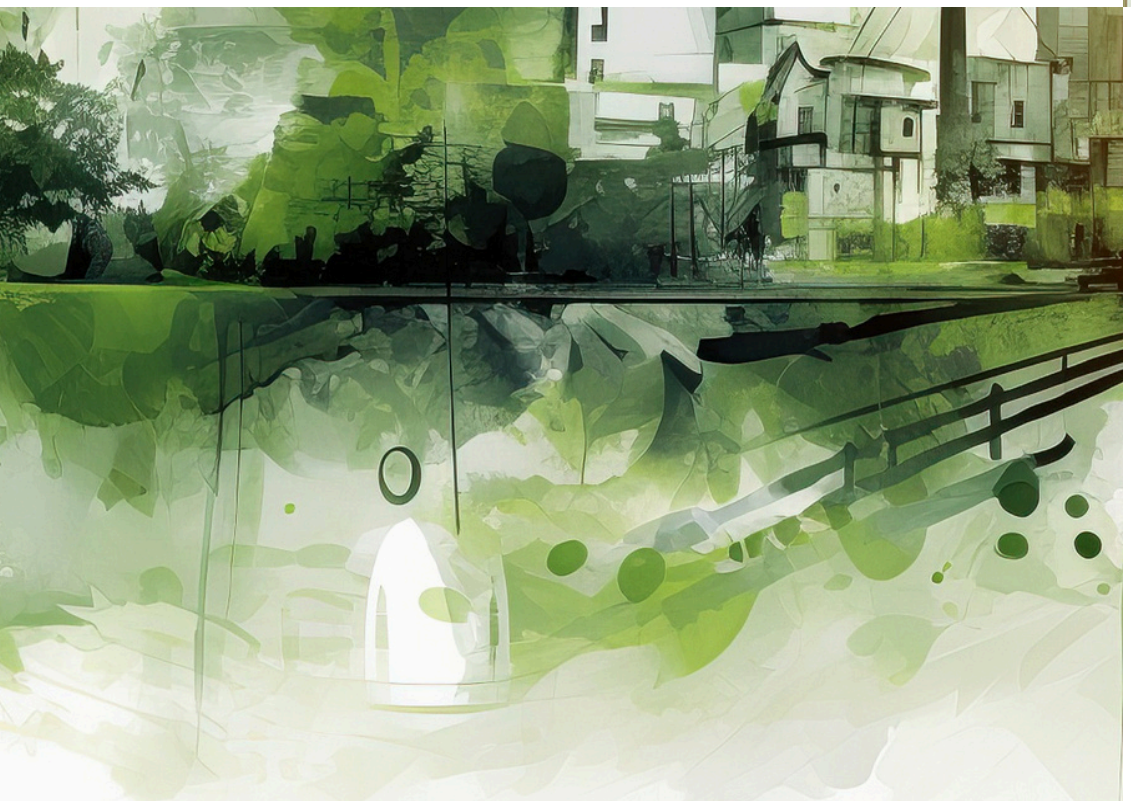
Blended Intensive Programme 2026

Sustainable Engineering in Action: from Idea to Impact

DETAILED DESCRIPTION OF THE VIRTUAL COMPONENT

Sustainable engineering, circularity and sustainable practices must be incorporated in all stages of a value chain to achieve a fully circular economy - from design to production and all the way to the consumer. To gain knowledge about sustainable engineering practices and their relevance, the students will explore one of the seven key areas of circular economy set down in the European Commission action plan: Plastics; Textiles; e-Waste; Food, water & nutrients; Packaging; Batteries & vehicles; Buildings and construction.



VIRTUAL COMPONENT
Feb 23rd - Mar 22nd

PHYSICAL COMPONENT
Mar 23rd-27th

Ahead of the physical component of this BIP, students will be asked to carry out a preliminary work. This document describes the tasks which will be proposed for this work. Their objective is to help students understand the complexities and interdisciplinary nature of advanced sustainable engineering practices, sustainable materials and circular economy within specific sectors. The work carried out by each group throughout the virtual component will be presented on the first day of the physical component, on Monday 23rd, and further develop during the rest of the week.

The virtual component comprises two parts:

PART 1. Research Phase (Feb 23rd - Mar 8th)

PART 2. Analysis and Presentation Preparation (Mar 9th-22nd)

PART 1. Research Phase

WEEKS 1 & 2
Feb 23rd - Mar 9th

1 Group formation and topic selection

Students will be divided into groups and each group selects which key area of circular economy

Plastics | Textiles | e-Waste | Food, water and nutrients
Packaging | Batteries and vehicles | Buildings and construction

it chooses to address.

2 Research objectives

Each group should fulfill the following research objectives with respect to the selected topic:

- Drivers: Identify what drives sustainability and circularity in the chosen topic. Consider environmental, economic, and social factors.
- Obstacles: Determine the challenges that the selected topic faces in implementing sustainable engineering practices.
- Legislation and regulations: Investigate and identify existing laws and policies affecting the selected topic. Both EU-wide and national regulations should be included in this research.
- Innovation needs: Explore which innovations are required to enhance sustainable engineering. Make a list of new technologies, processes, etc.

3 Report

Present the outcomes of the research phase in the form of a written report. This report will be the basis for the work to develop in Part 2 of the virtual component and must include:

- Identification of the group and of the selected topic
- Description of each one of the items listed in the research objectives.
- References (mix of academic articles, industry reports, government publications, credible news sources, databases, etc).

PART 2. Analysis and Presentation Preparation

WEEKS 3 & 4
Mar 10th - 22nd

1 Analysis and synthesis

- Analyze the findings from Part 1.
- Investigate case studies or examples of companies / products that embody sustainable engineering practices within the chosen topic.
- Discuss within the group how to synthesize information into a coherent narrative.

2 Presentation preparation

- Structure a presentation to cover all research objectives, as well as the case studies / examples of companies / products that embody sustainable engineering practices in their chosen area.
- Develop visual aids such as slides, charts, or diagrams to enhance and support the presentation.

3 Rehearsal

- Practice delivering the presentation within the group.
- Provide feedback to each other to improve clarity and engagement.

Each group will have a shared area in Teams.
All materials gathered and produced (report and presentation) should be uploaded to this area.

Any questions?
Our coordinator Carla Viveiros is happy to help you.