FACT SHEET BIP 2027

Organizing institution	KU Leuven **Erasmus code: B LEUVEN01**
Partners	• FH Dortmund, Germany • University of the Basque Country EHU, Spain • University of Udine, Italy • ISEL, Portugal • Free University of Bolzano, Italy • Universitat de Girona, Spain • Lund University, Sweden
Are you looking for partners ?	Additional international academic and industry partners are welcome
Title / Name BIP	Sustainable energy in an IoT world
Abstract	The transition towards a more sustainable society requires not only the development of innovative energy solutions but also the responsible integration of digital technologies. The BIP explores the interplay between digitalization and sustainable energy, highlighting how digital technologies can contribute to a more energy-efficient, environmentally friendly, and sustainable future. Particular attention is given to the opportunities and challenges associated with the growing use of digital technologies, emphasizing the importance of developing and implementing digital solutions in a responsible and energy-conscious manner to support climate action and reduce environmental impact. Through a combination of lectures and practical case studies, students will explore real-world challenges at the intersection of digital innovation and sustainable energy. Alongside developing their technical knowledge, they will strengthen essential transversal competences, including sustainability awareness, digital literacy, problem-solving, communication, and critical thinking. By combining technological insights with a sustainability-driven perspective, the programme aims to equip students with the knowledge and skills needed to contribute to responsible digital innovation and the energy transition.
Goal	Teaching activities include lectures, case studies, group work, hands-on prototyping sessions, and creative thinking workshops. Through project-based collaboration, students work on realistic and multidisciplinary

	challenges related to sustainable energy systems and IoT technologies.
Topics covered	• IoT anatomy • Energy budget analysis • Technologies and strategies for long autonomy • Wireless technologies for IoT • Electric mobility • Power system protection for grids • Power electronics • System and software architecture • Sensor technologies
Expected outcome(s)	By the end of the programme, students will understand the relationship between digital technologies and sustainable energy solutions and be able to identify how digitalization can contribute to energy efficiency, climate action, and reduced environmental impact. Through lectures and practical case studies, participants will develop the ability to critically evaluate the sustainability implications of digital technologies and explore opportunities for their responsible implementation. Working in international and interdisciplinary teams, students will strengthen their technical, analytical, problem-solving, communication, and teamwork skills, while developing a broader awareness of the role of digital innovation in the transition towards a more sustainable society.
Start and end date of the BIP	On-site phase in KU Leuven Ghent (confirmed): 15–19 March 2027
Content of virtual component	A flipped classroom approach is applied, where students prepare theoretical content independently before the interactive sessions. Prior to the physical mobility, students prepare the case study through online lectures, scientific papers, and a short assessment test. In addition, online meet-and-greet sessions are organised to help students connect within their international teams and to allow the coaches to evaluate the participants' technical backgrounds and prior knowledge.
Start and end date of the virtual component	• Virtual component before the on-site phase (tentative): 1 February – 15 March 2027 • Virtual component after the on-site phase (tentative): 20 March – 9 April 2027
Maximum number of students	50 students

Maximum number per university	8 students (Flexible)
Webpage	TBP
BIP ID	2026-1-BE02-KA131-HED-000424254-4