Course Descriptions None 2026-2027

Course Title	Circular Economy Project (Life Cycle Assessment)
Course Code	BENP1002
ECTS Credits	5,0
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
6	7-6-2027	2-7-2027	C				

Level	no level
Coordinator	Pranav Nakhate For more information:n.nakhate@maastrichtuniversity.nl
Language of instruction	English
Goals	The main aim of the course is to apply design and implementation principles of the circular economy on a value chain of a product to analyze how it can become more circular and evaluate the effects on the sustainability impact.
Description	In recent years, the concept of the Circular Economy (CE) has gained attention from governments and businesses. CE has the potential to move our current economy to a more sustainable and resource-efficient one. Through different value retention strategies, CE advocates the regeneration and redistribution of our production and consumption systems. Additionally, CE has the potential of creating improved social, economic, and environmental impact. Re-thinking how industrial products are manufactured and designed and how we will deal with them after product use, is essential in moving towards a more circular economy. The ultimate goal is to create a future economy, which is restorative and regenerative by design. This requires a multidisciplinary approach in which the resources, processing, product design, manufacturing and scenarios at the end of the product life cycle are geared towards circularity. Within the CE project, student teams will analyze a value chain of a product and assess the opportunities of this value chain in its quest to become more circular. They will also evaluate the effects of improved circularity on the sustainability impact. Companies will be asked to provide interesting cases for the projects. Student teams will report and present their findings at the end of the project.
Literature	* IRP (2018). Re-defining Value – The Manufacturing Revolution. Remanufacturing, Refurbishment, Repair and Direct Reuse in the Circular Economy. Nabil Nasr, Jennifer Russell, Stefan Bringezu, Stefanie Hellweg, Brian Hilton, Cory Kreiss, and Nadia von Gries. A Report of the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya. * Kalmykova, Y., Sadagopan, M., and Rosado, L. (2018) Circular economy – From review of theories and practices to development of implementation tools. Resour. Conserv. Recycl., 135, 190–201.
Prerequisites	It is NOT possible to register for this course as 'exam only'.
Keywords	Circular economy, value retention, value chain, sustainability impact
Transitional Regulations	
Teaching methods	PBL / Lecture / Assignment / Groupwork / Research
Assessment methods	Final Paper / Attendance / Participation / Presentation
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM

This course belongs to the following programme / specialisation

Bachelor Business Engineering	Year 1 Projects