

Do you want to be a part of creating solutions for global challenges? Then Circular Engineering is the right study programme for you. You will become part of a new generation of engineers who critically analyse and redesign technological processes in order to close material cycles, increase efficiency and minimise the ecological footprint at the same time.

Thanks to our interdisciplinary education, graduates of the Circular Engineering programme are highly competent decision-makers in industry, business and society.

## Montanuniversität Leoben

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Online pre-registration  
for admission



Technical University  
of Leoben

Move Mountains

CIRCULAR ENGINEERING: PROCESSES

# Circular Engineering

UNDERGRADUATE AND GRADUATE STUDIES



# Circular Engineering

## Curriculum Bachelor's Programmes

7 Semester (210 ECTS)

The Bachelor's programme Responsible Consumption and Production is taught in English. The first two semesters, which cover scientific and engineering fundamentals, are fairly similar for all programmes. Starting in the third semester, students acquire in-depth knowledge that qualifies them for entry into the profession. A mandatory internship in a related industry and the completion of a Bachelor's thesis are prerequisites for the academic degree Bachelor of Science (BSc).

Introductory Mode	Fundamentals of Engineering
<div><div>- Transferable Skills</div><div>- Introduction to STEM</div></div>	<div><div>- Chemistry</div><div>- Mathematics</div><div>- Physics</div><div>- Engineering Mechanics</div></div>
Digital Competences & Statistics Fundamentals	Introduction to Study Programme
<div><div>- Introduction to Data Modeling</div><div>- Algorithms and Programming</div><div>- Statistics</div></div>	<div><div>- Bacc Fundamentals</div><div>- Do-it Lab Circular Economy</div><div>- Do-it Lab Responsible Consumption and Production</div><div>- Elective Bacc Fundamentals</div></div>
Compulsory Courses, Semester 3 to 7	
<div><div>- Modul 1: Engineering Disciplines</div><div>- Modul 2: Sustainable Development</div><div>- Modul 3: Primary Raw Materials</div><div>- Modul 4: Secondary Raw Materials and Recycling</div><div>- Modul 5: Process Engineering</div><div>- Modul 6: Materials</div><div>- Do-it Lab 1/2/3</div></div>	<div><div>- Responsible Consumption</div><div>- Free Electives</div><div>- Seminar Bachelor Thesis</div></div>

A list with detailed study plans for all degree programmes at Montanuniversität Leoben can be found at [unileoben.ac.at](http://unileoben.ac.at).

## Bachelor's Programmes

This programme is taught in English and provides you with theoretical and practical knowledge in the fields of technology, natural sciences, sustainability and ecology.

This includes understanding the laws that structure nature, the interrelationships that serve our world, how production systems and material flow systems work, and how sustainability can be achieved.

You will learn to combine and apply these skills to view challenges and global developments from different perspectives and develop innovative solutions that contribute to a sustainable circular economy.

## Master's Programmes

This Master's programme provides you with technical and scientific knowledge in the areas of products and systems along the entire value chain. In particular, you will acquire expertise in resource efficiency, reducing greenhouse gas emissions and developing sustainable, reusable and recyclable products.

As a Circular Engineer, you will understand the concept of the circular economy of material flow systems, particularly from a production engineering perspective: from primary raw materials to production systems to the final product. You will also be familiar with the planning and implementation of the production of quality-assured, secondary raw materials out of end-of-life products by means of sustainable, innovative recycling processes. Resource and energy efficiency and minimising the environmental footprint of products and production systems constitute the core skills of Circular Engineers.

## Fields of Work

After completing your studies in Circular Engineering, you can expect a wide range of professional activities in the development of new technologies, products and materials, in the development of energy sources and raw materials, and in the development of environmentally and socially compatible value creation systems – wherever sustainable decisions have to be made.

As a Circular Engineer you are the lynchpin in companies, science and politics, playing a crucial role in the transition of technological processes towards a circular economy: Future Circular Engineers – Engineer the Future.