



UNIVERSITY
OF BORÅS



Resource Recovery – Polymer Materials for the Circular Economy

MASTER'S PROGRAMME

Polymer materials, including plastics and textiles, play a crucial role in our everyday lives. Therefore, the development of sustainable recycling methods and the creation of new polymer materials with minimal climate and environmental footprints are of utmost significance. If you aspire to explore this subject deeper and contribute to its progress, our Master's programme is designed specifically for you.

Resource Recovery – Polymer Materials for the Circular Economy

MASTER'S PROGRAMME

OUR PROGRAMME IN SHORT

Our programme focuses on polymer materials and their integration into a circular economy. It includes the concepts of polymer recycling, reuse, biodegradation, and their ecological impact. Additionally, it explores the development of renewable biopolymers and polymers that align with circular economy principles.

Within the programme, there is comprehensive coverage of the production, applications, and properties of plastics, textiles, and composite materials. Special attention is given to the potential of utilising biologically derived raw materials for polymer creation and their subsequent biological breakdown. Another focus is on the recycling of polymers as well as on the development of composites from natural fibres. The educational curriculum also incorporates the learning of practical laboratory methods to foster fundamental skills in the processing of plastics, composite manufacturing and structural characterisation, and material property testing.

RESEARCH IN RESOURCE RECOVERY AND TEXTILE TECHNOLOGY

As a student in this Master's programme, you

will have the opportunity to engage in the forefront of the university's research activities focussed on resource recovery and textile technology.

PROGRAMME STRUCTURE

In the first term, you will acquire broad competencies regarding the present state and future directions of the field of resource recovery on both a global and national scale. This entails an exploration of business insights and methodological knowledge, including life cycle analysis.

During the subsequent term, the programme places a specific emphasis on courses pertaining to polymer materials. Lastly, the programme includes a year-long degree project yielding 60 credits, wherein you will investigate the area of your particular interest in depth. This degree project can be conducted either within the industry or in collaboration with our esteemed researchers and doctoral candidates at the Swedish Centre for Resource Recovery and the Swedish School of Textiles at the University of Borås. It is also possible to do a degree project yielding 30 credits by taking additional elective coursework.



SNEHABEN GAURANGKUMAR MISTRY

"In the polymer programme, I learned so many things. Especially in plastic waste recycling. I also learned how we can produce bio-based polymers, or so-called sustainable polymers."



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