

## INTERNSHIP/THESIS JEANS TO SWEATER

Are you interested in the sustainable textiles, textile recycling and circular economy?

In the Jeans to Sweater project SFT research group works together with MudJeans, CCT Oss and Avans on improving the recycling of jeans and making them suitable for sweaters. With these partners the goal of this project is to determine, within the given timeframe, whether it is technically and commercially feasible to develop a fully automated and emission-free dyeing and finishing process. This includes recycling old jeans into fibers, removing their color in a sustainable way, spinning the fibers into new yarns, and dyeing them using a waste-free process. The final aim is to produce fully circular sweaters made in the Netherlands.



## TASK DESCRIPTION

This assignment focuses on small-scale experimental research into textile recycling, spinning, and knitting processes, with the aim of optimizing material performance and assessing feasibility for larger-scale application. Experiments will be conducted with recycling jeans on lab scale and trials to improve the fibre length. The resulting fibres will be analysed to evaluate their suitability for further processing. Using the spinning equipment of CTL, you will produce yarns and study how processing parameters influence yarn quality. These yarns will then be tested in knitting processes to assess their behaviour in fabric structures. Throughout the project, both yarn and fabric properties will be analyzed to understand the relationship between processing conditions and final material performance. The results will be used to evaluate technical feasibility and potential for upscaling, taking industrial relevance into account.

- You will work at the CTL lab and knitting lab in the Epy Drost building of Saxion. Here you will go through the process of creating a yarn through recycling of fibers, carding, drawing and spinning followed by processing of yarns into fabrics. You will also do quality testing on the fibres, yarns and fabrics.
- You will tackle one or more problems that we are facing in yarns production process.
- During weekly meetings with you supervisor, you will discuss your progress and issues.
- Assignment can be done in Dutch or in English

## PRACTICAL INFORMATION

- **Student profile:** This assignment is specifically for Fashion & Textile Technologies students with a strong interest in sustainable textiles and textile processing.
- We are looking for a student that can work very precisely and independent.
- As you will be working alongside other students and researchers in the lab we expect you to make a clear planning and have clear communication.
- **Contact person(s) for this assignment:** Maud Kuppen ([m.kuppen@saxion.nl](mailto:m.kuppen@saxion.nl))
- **Research group Sustainable and Functional Textiles:** [saxion.nl/sft](https://saxion.nl/sft)