

Internship in Materials and Environmental Issues

Supervisor	Prof. Dr. Feliciane Andrade Brehm
Project	Industrial solid waste; Process optimization for the minimization of waste; Cleaner production Characterization and recycling of materials and industrial solid waste life cycle analysis
Description	The activities developed in the project involve the evaluation of production processes that generate industrial solid waste (ISW), as well as their optimization using environmental management tools such as: cleaner production and life cycle assessment. After implementing process improvements, it is necessary to study proposals for internal or external recycling of these ISW. In order to promote recycling, the ISW must be characterized physically, chemically, thermally and structurally to determine their properties. After evaluating these results, the studies are focused on the recycling of ISW in order transform them into raw material for the same process or other industrial processes.
Tasks	<ul style="list-style-type: none"> • Representative sampling of RSI • Evaluation of the productive processes that generate the RSI • Use of analytical techniques to characterize RSI • Evaluation of production processes in order to verify the possibility of recycling RSI • Follow-up of pilot tests on a laboratory and/or industrial scale for the recycling of RSI
Requirements	Basic knowledge of chemistry and engineering
Language Skills	English (Portuguese would be nice, but is not necessary).
Duration	4-6 months
Possible Beginning	February/March or July/August.
Credits	According to agreement
Payment	None