Internship in Environmental Issues / Agronomy

Supervisor	Prof. Dra. Regina Célia Espinosa Modolo
Project	**Agricultural and forest biomass, recycling of solid wastes from biomass combustion (light and heavy ashes), agglomeration phenomenon in fluidized bed technology.**
Description	Project activities are related to the development of biochar from residual biomass via a slow pyrolysis process for use in improving agricultural soils, recycling industrial solid waste for use as an alternative material in the production of construction materials, such as cement, mortars and hot machined road pavements. The stages of the experimental program involve sampling and physical, chemical and morphological characterization of the studied materials and residues. Depending on the application, researchers may also choose to carry out a life cycle assessment of the studied product or process.
Tasks	• Sampling of industrial solid waste according to NBR 10.007/2004 • Analysis of solid waste generation processes • Characterization of waste and conventional materials to be replaced • Definition of operating conditions for the slow pyrolysis process for biochar production • Testing Biochar as a Soil Conditioner or Fertilizer • Plant production using biochar produced from residual biomass
Requirements	Basic knowledge of engineering processes
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