Project I Description

Project Name: **Design of a decentralized waste management system that is eco-friendly**

Sponsor: **N/A**

Project Overview

In Lebanon we are facing a crisis in managing residential and commercial waste. This project consists of developing a decentralized solution at the level of municipalities for waste collection and disposal. The solution should be eco-friendly in a way to maximize to possibility of recycling the waste and minimizing damage to the environment.

More specifically students are asked to

- Collect data on the volume and distribution of the waste that needs to be collected on a daily basis
- Develop a solution for waste collection that minimizes cost and time. Solution should provide the schedule, routing and number of trucks needed.
- Develop an efficient and effective solution for sorting and treating waste prior to disposal.
- Provide suggestions for final waste disposal that minimize cost and are sustainable

Project Areas

- optimization & simulation
- facility planning
- engineering economy
- lean principles

Project Deliverables

- Survey of best practices, standards and new technology available for waste collection and disposal

- Investigated system design solutions and justification for the proposed one
- A report emphasizing the economical, and sustainability aspects of the proposed solution and highlighting the risks associated with implementation of the proposed design.

Team Size and Majors needed

INE 3 students