LAU
الجامعة اللبنانية الأميركية
Lebanese American University

Department of Industrial and Mechanical Engineering

Project Description

Project Name: **Design and testing of the Shell Eco-Marathon car**

Team Size: **4 MEE Students**

Project Overview

The project consists in designing and building a car intended to participate in the Shell Eco-Marathon competition. The Shell Eco-Marathon is a car design competition that consists in designing a vehicle that travels the **farthest distance** using the **least amount of energy**. Two vehicle categories are considered: Prototype and Urban. Under each category, there are two engine classes: Electric Mobility (hydrogen battery or solar cells or plug-in electricity) and Internal Combustion (Gasoline or Diesel or Biofuels or Gas-To-Liquid fuel). Depending on the selected car type / category a set of design specs is specified by the Shell Eco-Marathon organizing committee: volume, height, width, weight, number of wheels, safety standards... Students will have to participate in a fund raising campaign for the project in order to raise the necessary funds for the car design and shipment and to cover their accommodation and participation to the event.

Project Areas and Majors

- Power Train Design (1 MEE student)
- Kinematics (1 MEE student)
- Structural Design (2 MEE students)

Project Deliverables

- Report including design parameters, aerodynamic study, FEM analysis…
- Operational vehicle, designed according to the specs specified by the competition

Design Constraints

For details about the design specifications, competition regulations and procedures, refer to: http://www.shell.com/home/content/ecomarathon