

# **Department of Industrial and Mechanical Engineering** Project I - Description الحامعة اللثنانية الأمبركية

## **Project Name**

Design for Vibration Suppression in Electric Generators

#### **Project Overview**

Electric generators are commonly used in Lebanon to overcome the shortage in the electric power provided by the government. These generators are prone to vibrations which might lead to mechanical failures and noise emission. The aim of this project is to design vibration suppression systems which might include a combination of vibration absorbers and vibration isolation systems to reduce and suppress this unwanted vibration. The design will include fatigue analysis of all proposed vibration suppression systems to ensure a prolonged life. The project will consider commonly used generators in Lebanon.

#### **Project Areas**

MEE442 Mechanical Vibration

MEE422 ME Design

#### **Team Size and Majors needed**

MEE: 4 students INE: 0 student

### **Project Deliverables**

Project should consist of the following:

- Modeling of an electric generator with cabin.
- Propose a combination of absorbers designs and vibration isolation systems.
- Fatigue analysis of the final design.

**Prerequisite: MEE 442 Mechanical Vibrations**