

# Project I Description

---

**Project Name:** Augmented Balance Exoskeleton System for Paraplegic Persons

**Sponsor:** Phoenix Industries – LAU – Michael Haddad

**Team Size:** 3 MEE Students

2 teams

---

## Project Overview

T3-T4 and T4-T5 paralyzed persons are normally unable to stand-up or walk. Michael Haddad defied this paralysis and developed novel method of locomotion. His major breakthrough is his ability to balance himself on two sticks. The aim of this project is to develop an exoskeleton system that provide a normal paralyzed person with the ability to balance themselves through active controls while they learn how to move like Michael Haddad.

## Project Areas and Majors needed

Kinematics (1 MEE Student)	Instrumentation (1 MEE Student)	Control Systems (1 MEE student)
-------------------------------	------------------------------------	------------------------------------

## Project Deliverables

Design and Build the following systems:

- Design and simulate a counterweight balance pendulum.
- Implement and control the designed system
- Design and simulate a counterweight balanced bipedal mechanism.
- Implement and control the designed system