

# Project I Description

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**Project Name:** Autonomous Self-rechargeable Quad-copter

**Sponsor:** LAU

**Team Size:** 1 MEE and 1COE Students

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## Project Overview

Quad-copters have been proven to be a stable, efficient, safe, and reliable means of small parcel transportation. However the range of transportation is short and limited by the battery weights. The purpose of this project is to design and test a fully autonomous Quad-copter that hovers over a long distance by self-recharging through landing on solar powered recharging stations.

## Project Areas and Majors needed

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| <ul style="list-style-type: none"><li>• Instrumentation (1 MEE Student)</li></ul> | <ul style="list-style-type: none"><li>• Communications/Embedded Systems (1 COE Student)</li></ul> |
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## Project Deliverables

- Auto-piloted Quad-copter from a pre-set point A to Point C landing and taking off from Point B, a recharge station.
- Self-Rechargeable Quad-copter.
- Design of the Recharge station.
- Full stability control.

## Design Constraints

- Feasible
- Robust algorithm
- Carry its own weight, plus the instrumentation and communication systems, plus a camera

**Advisor:** Drs. Barbar Akle and Zahi Nakad

### Students:

Elio Challita (MEE)

Nicolas-Michael El Jamal (COE)