# Project I Description

**Project Name:** **Counter-Terrorism robot**

**Sponsor:** **LAU – National Instruments**

**Team Size:** **3 MEE Students**

## Project Overview

In shadow of the large scale national and international terrorist incidents, it is critical to provide first responders and rescue personnel with tools that enable more effective and efficient disaster response. The future of disaster response is definitely a mixture of humans performing high level decision making, intelligent agents coordinating the response, and humans and robots performing key physical tasks[1]. Providing government and civilian agencies with advanced technologies would increase the physical security against terrorism. The aim of this project is to design and develop an electrically-powered and remote-controlled robot that will be used in counter-terrorism. The robot should be capable of versatile maneuvering and should be equipped with a robotic manipulator for performing counter-terrorism actions.

## Project Areas and Majors needed

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|---|---|
| Kinematics<br>(1 MEE Student) | Instrumentation<br>(2 MEE Student) |

## Project Deliverables

Design and Build a counter-terrorism robot with the following functions:

- The robot must be capable of versatile maneuvering
- The robot is controlled through a form of two-way radio link
- The robot should provide continuous data, video feedback, and positioning
- The robot should carry multiple useful sensors
- The robot should have a robotic manipulator, which can be used for threat disposal and disarming
- The robot must be able to detect the location of people in need of help
- The robot must be modular so that other functions can be easily integrated