



Gandhinagar Institute of Technology

A Report on “Two days workshop on Quad Copters and Multi Rotors” Hosted by Mechanical Engineering Department (9th and 10th February 2016)

Programme:

Gandhinagar Institute of Technology always put efforts to nurture world class engineers who can stand strongly with their interdisciplinary and creative knowledge in this era of competition. The same had been proven yet again when ‘Mechanical Engineering Department’ hosted an aeronautic based workshop on **9th and 10th February 2016**. Workshop was organized by **Codex Design** under ‘*National Technology Awareness Campaign (NTAC)*’ in association with Shastra’16, **IIT Madras**. NTAC organizes series of workshop to promote the new age engineering education and its interdisciplinary application to motivate young graduating engineers to find creative and innovative solutions for the society. Total 84 students from mechanical, Computer, IT, Civil and Electrical department had participated in the workshop.

Workshop Objectives:

- To deliver aeronautics, electronics, mechanical and programming fundamentals, that works behind the UAVs i.e. Unmanned Aerial Vehicles.
- To make the students aware about the Research & Development growth in this discipline.
- To give hands on experience, in which students assemble the Quad Copter kit through the knowledge they gained in theoretical sessions.

Sessions:

Day: 1

Workshop was started at 9:30 AM on 9th Feb. with a welcome speech of Prof. Manthan Upadhyay. In the theory session following topics had been covered by Mr. Sundar, an Industrial Expert from Codex Design.

- ✓ Introduction to multi copters, its working principles
- ✓ Quad copter frame design
- ✓ Embedded system design
- ✓ Introduction to the sensors like accelerometer, gyroscope, compass.
- ✓ Radio Transmitter and Receiver
- ✓ Electronic speed controller

Day: 2

Unassembled kit of quad copters were given to all 12 groups, each consist of 7 members. Kit contained KK Board, Electronic Speed Controller, propellers, 4 BLDC motors, 11.1V Lipo battery, 2.4 GHz Radio Transceiver Module and other supporting tools. Through the guidance of both the instructors, students started assembly of the kit. Trouble shooting and simulation of kits were done by experts whose assembly is done successfully. All the participants were then transferred to front lawn and flying session of quad copter was demonstrated by experts.

Coordinators:

Faculty:

- i. Prof. Umang J. Patdiwala (HoD, ME)
- ii. Prof. Manthan D. Upadhyay (ME)
- iii. Prof. Ashish R. Majithiya (ME)
- iv. Prof. Vrajesh T. Makwana (ME)

Student:

- i. Kaushal Kakadia (6th Sem., ME)
- ii. Darshan Katariya (4th Sem., ME)
- iii. Rishil Patel (2nd Sem., ME)

Theory Session



Assembly Session



Flying Session



