



# **FLIGHT 2023**

# MADRAS INSTITUTE OF TECHNOLOGY DEPARTMENT OF AEROSPACE ENGINEERING ASSOCIATION OF AERONAUTICAL ENGINEERS

# UAV INTEGRATION WORKSHOP

(08/04/2023)

## Introduction

Quad-rotor is a rotary-wing aircraft with four rotors which has marked its interests for the benefit of both civil and military domains. Its amazing maneuverability and the ease to fly in constricted locations have achieved itself a remarkable position in the aviation sector. This training gives ideas and technology involved in development of drones with simulation and real-time flying experience which can help to develop career in drone development.

All engineering students & hobbyist of UAVs or Drones and Robotic backbone industries all other peoples who are interested can attend.

# **Highlights of the Quadcopter Workshop**

- 1. Introduction to Quadcopter, Components requirement and Constructional techniques
- 2. Learning about the working of accelerometer sensors, gyroscopic sensor, barometric sensor and controllers.
- 3. Flight controller calibration techniques
- 4. Hands on Flight controller, ESC, BLDC motors, Propellers, Transceivers
- 5. Flying and on-field experience

# **Schedule for the Workshop**

### Day 1 (08/04/2023)

09:00 am - 09:45 am: Inauguration

09:45 am - 10:45 am: Introduction to UAV, applications, working principles, components – introduction, control flow and power flow

10:45 am - 11:45 am: Payload calculation, sensor calibrations and real time regression with flight controller, UAV – control system

11:45 am - 12:30 pm: Component assembly and selection methods, calibration and programming methods

*12:30 am* – *01:25 pm*: Lunch break

01:30 pm - 03:00 pm: Flying filed instructions, pre-flight checks, simulation/pilot training(if possible), post-flight checks

#### **Outcome**

On completion of this workshop, students will be able to:

- 1. Participants can able to design and construct quad rotors on their own.
- 2. Will get knowledge on Multi-rotor development and dynamics
- 3. Learn & Interact with renowned Industry Expert
- 4. Participants will learn basic Remote piloting skills required
- 5. Hands on exposure on industrial machines and tools during the workshop

#### KIT WILL BE PROVIDED

Registration Fee: 499/- per person

#### **Contact Details**

For any queries regarding the event, feel free to contact the organizer.

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