

A Three day Workshop on "**Customization of Commercialized Agricultural Drones**" The Resource Person is **Mr. A. GOPI RAJA**, Chief Executive Officer, Fopple Drone Tech Pvt. Ltd. Kankipadu, Vijayawada, Krishna dist.

# **OBJECTIVES:**

- Beyond surveillance and delivery applications, UAVs are used for drone journalism, search and rescue, disaster response, asset protection, wildlife monitoring, firefighting, communications relay, healthcare and agriculture.
- To develop a lightweight drone with Autonomous Devices thrust vectoring technology that will allow the system to approach and fly near to surfaces and to orientate the system to scan surfaces regardless of their orientation.
- To modify the GPR system and antenna for use on a drone, optimising the scanning capability of the system.
- To develop a mapping algorithm for automatic flight and full scanning coverage of a dam structure, the use of a combination of SLAM, real time local sensing, LIDAR and GPS.
- To develop a communication system to wirelessly transfer the data from the drone to the operator's system and to generate a map of the scanned structure for inspection.

## <u>DAY-1</u>

## **MORNING SESSION:**

In this session the resource person explained about Introduction to Drones History of Drones, Types of Drones and Applications of Drones like Search and rescue, Security, Surveillance, Aerial photography & video (recreation), Surveying & GIS (mapping).

## **AFTERNOON SESSION:**

In this session the resource person explained about Agricultural drones are drones applied to farming in order to help increase crop production and monitor crop growth. Through the use of advanced sensors and digital imaging capabilities, farmers are able to use these drones to help them gather a richer picture of their fields. Information gathered from such equipment may prove useful in improving crop yields and farm efficiency.

#### <u>Day-2</u>

#### **MORNING SESSION:**

In this session the resource person explained about UAV making concepts, Drone making, Drone Hardware & simulation software execution method relating to them. A Drone, commonly known as Unmanned Aerial Vehicle (UAV) is essentially flying ROBOT (The air vehicles that do not carry a human operator). The aircraft may be remotely controlled or can fly autonomously through software-controlled flight plans in their embedded system working in conjunction with onboard SENSORS and Global Positioning System (GPS).

## **AFTERNOON SESSION:**

In this session the resource person explained about Components of a drone like Frame, Propellers, Motors, Flight controller, Power source, Structure, Description of block diagram and components, calculation & calibration concepts and how these components are assembled to preparation of Drones with handson experience to the students.

#### Day-3

## **MORNING SESSION:**

In this session the resource person explained about demonstration of flying, DGCA safety regulation and develop safety attitude while flying drones and basics of drone piloting. Hovering, take-off and landing and patterns to practice by the students.

## **AFTERNOON SESSION:**

In this session the resource person explained about different types of multi rotors, Quad, Hexa, co-axial drones, and explain about some IOT based applications and developing and innovative application with Drones.

## **OUTCOME:**

Students understand how to prepare a drone by the hardware components and installation of software to simulate the drone before operating the drone as physically manner and how to calculate the calibration of flight controllers for different drones like quad, Hexa co-axial drones with hands-on experience.

In this session, members of the Drone technology Mr. N. Hemanth Kumar. In charge BBA, Mr. P. Vasu, Lecturer, Department of Computers. Mr.R.Uday Kumar, In-charge Department of Electronics, Mr. P.Vishnu Vardhan, Department of Electronics. Sri Y. Jagadeesh, Faculty, Department of MBA and also 125 students from BBA, BCA, B.Com. (COMP),B.Sc (MECS),B.Sc(IOT),MCA, MBA have participated the programme.

## PHOTO GALLERY

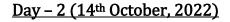




Talk by Mr. A. GOPI RAJA, Chief Executive Officer, Fopple Drone Tech Pvt. Ltd. Kankipadu, Vijayawada



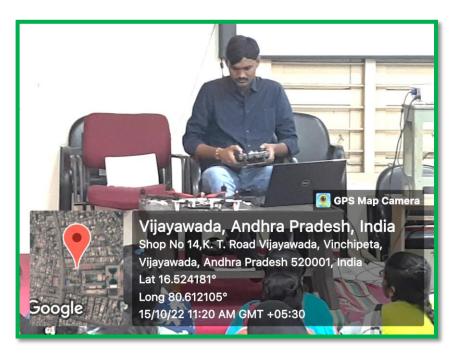
Dr. V. Narayana Rao, Principal, addressing the students







# <u>Day – 3 (15th October, 2022)</u>







## **BROCHURE**



Recognized as Band PERFORMER in <b>ARIIA</b> by Ministry of Education, Govt. of India
This is to certify that
Dr. V. Narayana Rao Convener Principal