



**A Report on Hands-on workshop on
“Multi Rotor Drone Technology & Aerodynamics”
Organized by Department of Electronics & Communication Engineering
in association with Training & Placement Cell & MITS IEEE Student Branch
from 29.01.2026 to 31.01.2026**



Report Submitted by: Dr. Sk. Nurul Islam, Assistant Professor, Dept. of ECE; Mr. G. Charan Kumar, Assistant Professor, Dept. of ECE

Resource Person Details: D. Veeranjanya, Founder & CEO, Ignite Embedded Systems Pvt. Ltd., Shiva Prakash, Sr. Lead Drone & Robotics, Ignite Embedded Systems Pvt. Ltd., R.S. Charan, Sr. Technical & Project Lead, Ignite Embedded Systems Pvt. Ltd., G. Thanooj, Embedded Engineer, Ignite Embedded Systems Pvt. Ltd.

Participants: 90 (Students)

Mode of Conduct: Offline

The Department of Electronics & Communication Engineering, in association with MITS IEEE, organized a hands-on workshop titled “Multi Rotor Drone Technology & Aerodynamics” on 29.01.2026 to 31.01.2026. The session aimed to provide students with a comprehensive understanding of drone systems, aerodynamic principles and their practical applications in modern engineering and industrial sectors.

The workshop brought the UG students to explore the rapidly evolving field of unmanned aerial vehicles (UAVs) and the scientific principles governing flight dynamics and drone design.

The three-day workshop on Drone Technology & Aerodynamics commenced with an inaugural session attended by the Heads of the Departments of Electronics & Communication Engineering (ECE), Electrical & Electronics Engineering (EEE), and Mechanical Engineering (ME), along with faculty members and students. In their addresses, the HoDs emphasized the growing significance of drone technology in various fields such as agriculture, surveillance, disaster management, mapping, delivery services, and defense applications. They encouraged students to acquire practical skills in emerging technologies to enhance their career opportunities.

During the afternoon session of the first day, the resource persons initiated the technical sessions by introducing the fundamentals of drone technology. The session covered the history and evolution of drones, classification of UAVs, basic principles of flight, aerodynamics, components of a drone, sensors, communication systems, safety regulations, and real-world applications. Participants actively interacted with the experts and clarified their doubts.



On the second day, the workshop focused on hands-on training in drone hardware. Participants were trained in the disassembly and assembly of drones, identification of various components such as motors, propellers, flight controllers, ESCs, GPS modules, batteries, and frames. The resource persons explained the working principles of each component and demonstrated proper assembly techniques, wiring, calibration, and safety precautions. This session helped students gain practical knowledge and confidence in handling drone hardware.

The third day's forenoon session was dedicated to drone programming and software configuration. Participants learned about flight control software, calibration procedures, controller settings, and basic programming required for drone operation. They were also introduced to mission planning, navigation, and troubleshooting techniques.

In the afternoon session, a live drone flying demonstration was conducted on the ground. The resource persons demonstrated take-off, hovering, manoeuvring, and landing techniques. A special flower-dispensing activity using the drone was also performed, showcasing the practical applications of drones in public events and emergency situations. The demonstration generated great enthusiasm among the participants.

The workshop concluded with a valedictory session in the presence of dignitaries, including the Honourable Principal, HoD-ECE, HoD-EEE, and HoD-ME. The dignitaries appreciated the efforts of the organizers and resource persons for conducting the workshop successfully. Participants shared their feedback and experiences, expressing that the workshop was highly informative and beneficial.

The event concluded with a certificate distribution ceremony held on the ground, where all participants received certificates for their active participation.



Outcome of the Workshop

The workshop successfully achieved the following outcomes:

- Improved understanding of aerodynamic principles and flight mechanics.
- Practical exposure to drone components and flight control systems.
- Awareness of industrial applications and career prospects in UAV technology.
- Understanding of safety norms and regulatory frameworks.
- Motivation to undertake drone-based innovative projects and research.