Department of Electronics and Communication Engineering

2-Day Hands-on SDP on Drone Technology: Basics to Flight

The Department of Electronics and Communication Engineering organized a three-day Hands-on Student Development Program (SDP) on *Drone Technology: Basics to Flight* for sixth-semester students from 13th to 14th March 2026.

The workshop was organized in association with Indian Society for Technical Education (ISTE). The program was conducted by Mr. Rakesh, resource person from RLogic Technologies, where the 6th semester students of the Electronics and Communication Engineering Department took active participation and enrolled in the SDP. Technical sessions and practical demonstrations both were conducted and assisted by the faculty of the department.

The objective of the program was to introduce students to the fundamentals of drone technology, its design aspects, components, flight mechanisms, and real-world applications. With the increasing relevance of Unmanned Aerial Vehicles (UAVs) in industries such as agriculture, defense, surveillance, mapping, disaster management, and delivery systems, the program aimed to equip students with both theoretical understanding and practical exposure.

The program commenced with a brief inaugural session, which was formally inaugurated by Dr. Vishwanath P, Head of the Department of Electronics and Communication Engineering. In his address, he highlighted the growing importance of drone technology in modern engineering applications and encouraged students to actively participate in such hands-on training programs to develop technical skills that complement their academic learning.

He also emphasized that emerging technologies like drones, AI, and IoT are shaping the future of engineering, and exposure to such technologies will help students enhance their innovation and employability.

The technical sessions were conducted by Mr. Rakesh from RLogic Technologies, who introduced students to the basic architecture and working principles of drones. The sessions covered several important topics including:

- Introduction to Drone Technology and UAV Systems
- Types of drones and their industrial applications
- Components of a drone such as frame, propellers, motors, ESC, flight controller, GPS module, and battery
- Working of sensors and stabilization systems
- Basics of drone communication and control mechanisms
- Safety measures and operational guidelines

The resource person explained the concepts with live demonstrations and real drone hardware, enabling students to understand how different components interact to achieve stable flight.

One of the major highlights of the program was the hands-on training session, where students were given practical exposure to drone assembly and flight operation.

Under the guidance of Mr. Rakesh, students learned about:

- Identification of drone components
- Assembly and configuration of drone hardware
- Calibration of sensors and controllers
- Basic flight control operations
- Safety procedures during drone flight

Students actively participated in operating the drones, observing flight control mechanisms, and understanding how drones are stabilized and maneuvered during flight. The hands-on activity helped students connect theoretical knowledge with practical implementation.

The sessions were highly interactive, with students asking questions related to drone design, career opportunities in UAV technology, and future developments in autonomous systems. The program helped students gain insights into real-world applications of drone technology and its interdisciplinary nature involving electronics, communication, control systems, and programming.

Students expressed great enthusiasm and interest in learning about emerging drone technologies and their applications in smart systems and industry.

At the end of the second day, a feedback session was conducted where students shared their experiences and provided positive feedback about the program. Participants appreciated the practical approach, live demonstrations, and interactive nature of the training.

The program concluded with a Vote of Thanks delivered by Prof. Jyoti, who expressed sincere gratitude to Mr. Rakesh from RLogic Technologies for delivering insightful sessions and providing valuable hands-on training to the students. Faculty members of the department Prof. Rachamma Patil, Dr. Sangamesh H., Prof. Smita C. Chetti, Prof. Shilpa Patil, Prof. Bassamma patil, Prof. Basawaraj patil and Prof. Suma were present on the occasion.

The Two-Day Student Development Program on Drone Technology proved to be a valuable learning experience for the students, providing them with practical knowledge and exposure to an emerging technology that is rapidly transforming multiple industries.
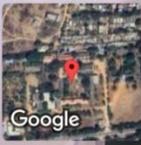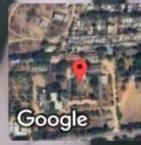
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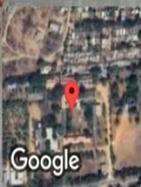
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