

UAV RESEARCH AND DEVELOPMENT WORKSHOP

A three-day UAV (Unmanned Aerial Vehicle) workshop was successfully conducted from 19th January to 21st January. The objective of the workshop was to introduce students to the fundamentals of UAV systems and provide hands-on exposure to drone components, working principles, and practical applications.

During the workshop, students were familiarized with essential UAV hardware including BLDC motors, ESC (Electronic Speed Controller), flight controllers, servos, transmitters, and batteries. The sessions also covered important communication concepts such as PWM, I2C, SPI, and telemetry protocols including MAVLink and MSP, enabling students to understand how data and control signals flow within a drone system.

Students learned the role of each component in UAV operation and gained clarity on how the flight controller processes sensor data to stabilize the drone using concepts like IMU and PID control. Safety considerations and basic system integration were also discussed, helping students develop a practical understanding of real-world UAV building and operation.

The workshop concluded with an interactive discussion and Q&A session, where participants clarified doubts and strengthened their understanding of drone technology. Overall, the workshop was informative and beneficial, enhancing students' technical knowledge and interest in UAV research and development.



