

A
SEMINAR REPORT
ON
**“DRONE
TECHNOLOGY”**



Organised By:
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On 5th September, 2023, Mechanical engineering department of GIDC Degree Engineering College, Abrama organized an enlightening seminar on drone technology in collaboration with VAMA Skylight, a leading company in the drone industry. The seminar aimed to provide students and faculty with insights into the world of drones, their applications, and their rapidly evolving technology. Mr. Nikunj Bajoria, Mr. Abhishek Nathani, and Mr. Dhruv seasoned professional from VAMA Skylight, conducted the seminar and provided a practical demonstration of drone operations. Total 47 students of 7th semester from mechanical engineering department have attended the seminar. This report summarizes the key highlights and takeaways from the event.

Seminar Highlights

The seminar began with an introduction to the history and evolution of drones, emphasizing their military origins and their subsequent transition into civilian and commercial applications. Mr. Dhruv presented an overview of the various industries where drones are making a significant impact, such as agriculture, construction, cinematography, and environmental monitoring.

Applications of Drone Technology

Mr. Dhruv discussed in detail the diverse applications of drone technology:

1. **Agriculture:** Drones equipped with advanced sensors can monitor crop health, detect diseases, and optimize irrigation, leading to increased yields and reduced resource usage.
2. **Construction:** Drones aid in site surveying, progress monitoring, and safety inspections, improving efficiency and reducing project costs.
3. **Cinematography:** The seminar showcased breath taking aerial shots captured by drones, highlighting their role in the film and entertainment industry.
4. **Environmental Monitoring:** Drones are crucial in tracking environmental changes, wildlife conservation, and disaster management, enabling timely responses and data-driven decisions.

Drone Technology Advancements

Mr. Dhruv also delved into the technological advancements that have propelled the drone industry forward:

1. **Battery Life:** Continuous improvements in battery technology have extended flight times, allowing drones to cover larger areas and undertake more complex missions.
2. **Remote Sensing:** The integration of high-resolution cameras, LiDAR, and thermal imaging sensors enhances the capabilities of drones for data collection and analysis.
3. **Autonomous Navigation:** GPS and AI-driven software enable drones to operate autonomously, reducing the need for constant human intervention.
4. **Regulatory Framework:** Nikunj emphasized the importance of adhering to aviation regulations and obtaining necessary permits to operate drones legally and safely.

Practical Drone Demonstration

The highlight of the seminar was the practical demonstration of drone technology by Mr. Nikunj Bajoria, Mr. Abhishek Nathani, and Mr. Dhruv. They showcased a range of drones, from small consumer models to advanced industrial-grade units. The live demonstration included:

1. **Pre-flight Checklist:** Nikunj emphasized the importance of safety by discussing a pre-flight checklist that covers aspects such as weather conditions, airspace restrictions, and equipment readiness.
2. **Drone Assembly:** He demonstrated how to assemble and prepare a drone for flight, emphasizing the need for meticulous attention to detail.
3. **Flight Maneuvers:** Attendees witnessed various flight maneuvers, including takeoff, landing, and navigation. Nikunj showcased the precision and stability of modern drones.
4. **Real-time Imaging:** The audience was treated to real-time video feeds from the drone's camera, illustrating its potential in capturing high-quality aerial footage.

Conclusion

The seminar on drone technology organized by GIDC Degree Engineering College, Abrama in collaboration with VAMA Skylight was a resounding success. Attendees gained valuable insights into the applications and advancements of drone technology. Nikunj's practical demonstration not only showcased the capabilities of drones but also underscored the importance of responsible drone operation and adherence to regulations.

This event serves as a testament to GIDC College's commitment to providing students with exposure to emerging technologies and practical knowledge that prepares them for the dynamic job market. It is hoped that seminars like these will continue to inspire students to explore the exciting world of drone technology and consider its potential applications in their future careers.



