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DEPARTMENT OF AERONAUTICAL ENGINEERING

Event Report (AY2024-2025)

Name of the Event : Skill Development Program on UAV Design and

Development

Date & Time : 09/12/2024 & 10/12/2024

Place : AE Seminar Hall

Resource Person : Ozhli Academy of Science, Bengaluru

No of Student Participants : 43

Event Coordinators : Mr.Ganesh & Mr.Sarathkumar S

About the Event:

The Department of Aeronautical Engineering in Associate with Aeronautical Skill Sector Council (ASSC) successfully organized a two-day Skill Development Program on UAV Design and Development on 9th and 10th December 2024 at the AE Seminar Hall. The program was conducted in collaboration with Ozhli Academy of Science, Bengaluru, a reputed organization specializing in aerospace training and technology.

The program aimed to provide students with hands-on exposure and practical insights into the fundamentals of Unmanned Aerial Vehicle (UAV) design, fabrication, and flight principles. A total of 43 students from the department enthusiastically participated in the event. Experts Mr.Bharani and Ms.Shalini from Ozhli Academy delivered comprehensive sessions on UAV aerodynamics, structural design, propulsion systems, control mechanisms, and integration of onboard systems. The resource team also guided students through simulation exercises and design tools commonly used in UAV development.

Interactive workshops allowed students to work in teams to conceptualize, model, and test their own UAV prototypes. This practical approach enabled them to apply theoretical knowledge to real-world applications, enhancing their technical and problem-solving skills.



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The second day featured flight demonstrations and performance analysis, giving students an opportunity to observe UAV dynamics in action and understand key parameters affecting flight stability and efficiency.

The program concluded with a feedback session where students expressed their appreciation for the practical knowledge gained. The department thanked the team from Ozhli Academy for delivering a highly engaging and educational experience. The event was a significant step towards nurturing innovation and technical expertise in the field of aeronautics. The event was a great success and added significant value to the academic enrichment of the students.

Event Poster:





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Workshop Schedule & Topics



MAVIC - Drone Training Workshop

The Drone Training Workshop is a hands-on program designed to teach students the development, assembly, and operation of unmanned aerial vehicles (UAVs). The workshop spans two days and is divided into six sessions, covering fundamental concepts to real-world applications like flight simulations and live drone testing.

Each student will engage in both theoretical lessons and practical activities, ensuring a comprehensive learning experience.

Detailed Breakdown of Sessions

SI No.	Session Name	Description						
1	The Fundamentals	Learn the fundamentals of drones, their working						
		principles, aerodynamics, and practical applications.						
2	Drone Design	Understand various drone configurations (H-type, V-						
	Configurations	tail, Palm), components, and their selection process.						
3	Assembly & Mission	Plan the assembly process using EBOM & MBOM and						
	Planning	understand mission planning and drone operation						
		essentials.						
4	Building H-Type	Hands-on assembly of an H-type drone and						
	Drone	performing flight simulations for stability and control.						
5	Building V-Tail Drone	Assembly of a V-tail drone, with flight simulation						
		focusing on navigation and mission-specific stability.						
6	Building & Testing	Build a compact palm drone and test it through real-						
	Palm Drone	world flight scenarios and troubleshooting.						

Course Outcome

Students will:

- · Gain an in-depth understanding of UAV principles and components.
- Learn to design and build different types of drones.
- Develop skills in mission planning, safety, and drone maintenance.
- Engage in virtual flight simulations and live drone testing.
- Acquire industry-relevant skills for working with UAVs.

The course is structured to balance theoretical concepts with hands-on activities. This approach enables students to retain and apply knowledge effectively. The training emphasizes gamified learning to make the process engaging and interactive.



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Event Certificate





Certificate of Participation

To Whom It May Concern:

This is to certify that **Kavya Shree T A**, a student of B.E. (Aeronautical Engineering) at ACS College of Engineering, Bengaluru, has successfully completed two days hands-on workshop titled "MAVIC - A Drone Training Workshop" organized by Ozhli Academy of Science from December 9, 2024, to December 10, 2024.

During the workshop, Kavya gained practical experience in:

- Drone Assembly & Dismantling: Hands-on experience in assembling, dismantling, and understanding drone components.
- Drone Selection Process: Learned to select drones based on mission needs, payload, and environmental factors.
- Mission Planning: Developed skills in route mapping, safety protocols, and efficient mission execution.
- Simulated Flight Training: Mastered drone controls and navigation through simulated flight exercises.
- Indoor Flying: Demonstrated precision and stability in controlled indoor drone flights.

Congratulations on completing the session, Kavya! We wish you continued success in your academic and professional endeavours.

Sincerely

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[BHARANI SHANKAR D] CEO, Ozhli Academy of Science

Ozhli Academy of Science

2nd Floor, No, 9, 4th Cross Rd, Gupta Layout, Halasuru, Bengaluru, Karnataka 560008

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Event Pictures







Campus

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Event Coordinators

Mr.Sarathkumar & Mr.Ganesh R

Head of the Department
Aeronautical Engineering
ACS College of Engineering
Mysore Road, Kambipura
Bangalore-560074

HOD

Dr.G.Ramanan

Campus

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ACS COLLEGE OF ENGINEERING

AERONAUTICAL ENGINEERING

Skill Development Program-UAV Design and Development using a multi Physics platform SESSION ATTENDANCE SHEET

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DEPARTMENT OF AERONAUTICAL ENGINEERING

EVENT FEED BACK FORM

TECHNICAL TALK ON "Student Skill development program on UAV Design and Development-using a Multi Physics Simulation Platform"

SPEAKER: Ms.Shalini

DATE: 09/12/2024 & 10/12/2024

Questionare	Very Good (5)	Good (4)	Satisfactory (3)	Unsatisfactory (2)	Poor (1)
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Was the presenter able to reach you?	~				
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