

# **Report for One Week Workshop on "Drone Technology and Its Applications"**

## **Department of Electronics and Communication Engineering**

### **Central University of Jammu**

A six-day workshop on "**Drone Technology and its Applications**" under the Malviya Mission of Teachers Training Centre (UGC-MMTTC) of the Central University of Jammu has been organized by Department of Electronics and Communication Engineering (DoECE) at Central University of Jammu from **October 14 to October 19, 2024**. The primary objective of the short term training program cum workshop is to provide the knowledge from basics to in-depth understanding of drone technology and its various applications in the modern era.

#### **Objectives of the Workshop:**

- Understanding drone technology fundamentals
- Exploring diverse drone applications
- Hands-on drone assembly and operation
- Introduction to drone control systems
- Drone flight planning and mission execution
- Understanding legal regulations
- Encouraging academic research with drones
- Exploring future trends in drone technology

#### **Key Highlights of the Workshop:**

- **Interactive Sessions on Drone Fundamentals**
- A series of detailed sessions on the fundamentals of drones, including their anatomy, flight dynamics, and control systems, were conducted. These lectures gave participants a solid theoretical foundation.
- **Hands-on Training and Drone Assembly**
- One of the most engaging aspects of the workshop was the hands-on experience, where participants were guided through the assembly of drones. This practical exposure enabled them to understand how various drone components function together to ensure successful flight operations.
- **Flight Simulation and Real-World Piloting**
- Participants were introduced to flight simulation tools, followed by real-world piloting experiences. These activities not only built confidence in operating drones but also provided critical insights into troubleshooting during flight.
- **Applications of Drone Technology**
- The workshop covered a broad range of drone applications in fields like **agriculture, disaster management, environmental monitoring, and infrastructure inspection**. Special attention was given to case studies and practical examples, allowing participants to connect theoretical knowledge to real-world scenarios.
- **Legal and Regulatory Framework**
- Experts discussed the **DGCA regulations** and drone safety guidelines, ensuring that participants understood the legalities surrounding drone operations in India. This was particularly important in light of increasing drone usage in civilian airspaces.
- **Emerging Trends and Future Prospects**

- The final sessions explored cutting-edge advancements in drone technology, including **AI- driven autonomous drones, swarm technology**, and innovations in drone communication systems, preparing participants for the evolving future of this field.

### List of Resource Persons:

1. Mr. Ashish Jaiswal, Technical lead, Drona Aviation Ltd.
2. Mr. Atul Mehta Embedded Engineer, Drona Aviation Ltd.
3. Mr. Gaurav Singh, Trainer, Drona Aviation/ CEO Delvik Apps
4. Mr. Amit, Drona Aviation/ CEO Delvik Apps
5. Dr. P. Anand, Garuda Aero Space
6. Dr. K. Ramesh Kumar, Garuda Aero Space
7. Mr. Vikrant, Drone Pilot, Garuda Aero Space
8. Mr. Kirubakaran, Drone Pilot, Garuda Aero Space

### Schedule of the workshop

Date	Morning sessions				Evening sessions			
14-10-2024	<b>Inaugural Ceremony</b> 10:30-11:30	RP: Mr Ashish <b>Drona Aviation</b> 11:30-12:30	Tea break	RP: Mr Ashish <b>Drona Aviation</b> 12:30-13:30	<b>Lunch break</b>	RP: MrAtul <b>Drona Aviation</b> 14:30-15:30	Tea break	RP: MrAtul <b>Drona Aviation</b> 15:30-16:30
15-10-2024		RP: MrAtul <b>Drona Aviation</b> 11:30-12:30	Tea break	RP: MrAtul <b>Drona Aviation</b> 12:30-13:30	<b>Lunch break</b>	RP: Mr Ashish <b>Drona Aviation</b> 14:30-15:30	Tea break	RP: Mr Ashish <b>Drona Aviation</b> 15:30-16:30
16-10-2024		RP: Mr Gaurav <b>Drona Aviation</b> 11:30-12:30	Tea break	RP: Mr Gaurav <b>Drona Aviation</b> 12:30-13:30	<b>Lunch break</b>	RP: Mr Amit <b>Drona Aviation</b> 14:30-15:30	Tea break	RP: Mr Amit <b>Drona Aviation</b> 15:30-16:30
17-10-2024		RP: DrAnand Garuda Aerospace 11:30-12:30	Tea break	RP: DrAnand Garuda Aerospace 12:30-13:30	<b>Lunch break</b>	RP: Dr Ramesh Garuda Aerospace 14:30-15:30	Tea break	RP: Dr Ramesh Garuda Aerospace 15:30-16:30
18-10-2024		RP: RP: Dr Ramesh Garuda Aerospace 11:30-12:30	Tea break	RP: RP: Dr Ramesh Garuda Aerospace 12:30-13:30	<b>Lunch break</b>	RP: DrAnand Garuda Aerospace 14:30-15:30	Tea break	RP:DrAnand Garuda Aerospace 15:30-16:30
19-10-2024		Agri Drone Flying Session Mr. Vikrant Mr. Kirubakaran 11:30-12:30		Photography Drone Flying Session Mr. Vikrant & Mr. Kirubakaran 12:30-13:30	<b>Lunch break</b>	Valedictory Session		

### List of Participants

Sr.No .	Name of the applicant	Affiliation/Institute/Organizati on	Student/Phd Scholar/Faculty	Gender	Department
1	Kajal	Central university jammu	Faculty	Female	Electronics and communication
2	Sachin Kumar Gupta	Central University of Jammu	Faculty	Male	Department of Electronics and Communication Engineering
3	Dr. Gourav Kumar	Central University of Jammu	Faculty	Male	Computer science and engineering
4	Arun Kumar Sharma	Central University of Jammu	Faculty	Male	Computer Science and Engineering
5	Gaurav Thakur	Central University of Jammu	Faculty	Male	Computer Science and Engineering
6	HaneetKour	Central University of Jammu	Faculty	Female	Electronics and Communication
7	HarnainKour	Central University of Jammu	Faculty	Female	Computer Science & Engineering
8	Vinita Sharma	Central University of Jammu	Faculty	Female	Zoology
9	Dr. Sanjeev Yadav	Central University of Jammu	Faculty	Male	Electronics and Communication Engineering
10	Dr. Deepti Malhotra	Central University of Jammu	Faculty	Female	Computer Science and Information Technology
11	Dr Ashok Kumar Yadav	Central University of Jammu	Faculty	Male	Zoology
12	Sudhir Singh	Central University of Jammu	Faculty	Male	Center for Molecular Biology
13	DrPawan Kumar	Central University of Jammu	Faculty	Male	Chemistry & Chemical Science
14	DrPriyank Sharma	Central University of Jammu	Faculty	Male	Electronics and Communications
15	Dr. Mudassir Ahmad Bhat	Central University of Jammu	Faculty	Male	Department of Botany
16	DrPravesh Pal	Central University of Jammu	Faculty	Male	Electronics and Communication Engg
17	DrPalak Mahajan	Central University of Jammu	Faculty	Female	Computer Science and Engineering
18	Dr. Arun Bali	Central University of Jammu	Faculty	Male	Mathematics
19	DrSahil Sharma	Central University of Jammu	Faculty	Male	Mathematics
20	Dr. Rajiv Kumar	Central university of Jammu	Faculty	Male	Electronics and Communication

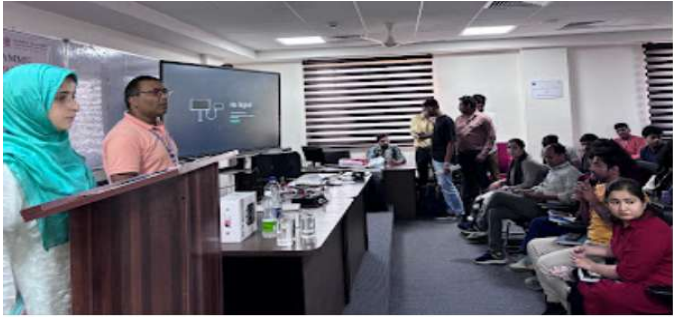
21	Praveen Modi	JUIT Wagnaghat	Faculty	Male	Computer science and Information technology department
22	Anutusha Dogra	Lecturer, UIET, Jammu University	Faculty	Female	Electronics and Communication Engineering
23	Zeenat Zahra	LOVELY PROFESSIONAL UNIVERSITY	Faculty	Female	CSE
24	Amrik Singh	MBS College of Engg. & Technology	Faculty	Male	Computer Science & Engineering
25	Sanjeev Singh	MBS College of Engg. & Technology	Faculty	Male	ECE
26	Dr. Vinod Kumar	Mody University of Science and Technology	Faculty	Male	Computer Science and Engineering
27	Dr. Yashpal Yadav	NIMS University, Jaipur	Faculty	Male	Electrical, Electronics & Electric Vehicle Engineering
28	DrKhushbooPachori	Sanjeev Agrawal Global Educational University	Faculty	Female	School of Engineering and Technology
29	Mantisha Gupta	Shri Mata Vaishno Devi University	Faculty	Female	Electronics and Communication
30	Dr. RajanBadyal	Central University Jammu	Phd Scholar	Male	Central University Jammu
31	NarinderVerma	Central University of Jammu	Phd Scholar	Male	Computer Science and IT
32	Geeta	Central University of Jammu	Phd Scholar	Female	CSIT
33	Shashi Kant Rai	Central University of Jammu	Phd Scholar	Male	Department of Environmental Sciences
34	Dr. SaritaBamotra	Central University of Jammu	Phd Scholar	Female	DST-PURSE
35	Ayesha Bhandari	Central University of jammu	Phd Scholar	Female	Department of physics and astronomical sciences
36	Mohan Singh Dhangar	Central University of Jammu	Phd Scholar	Male	National Security Studies
37	Gaurav Awasthi	Central University of Jammu	Phd Scholar	Male	Department of Nanoscience and Materials
38	Sunakshisharma	Central university of Jammu	Phd Scholar	Female	DST PURSE
39	Anuj yadav	Central University of Jammu	Phd Scholar	Male	Chemistry and chemical science

## Highlights of the workshop

The inauguration of a six-day workshop on "Drone Technology and its Applications" under the Malviya Mission of Teachers Training Centre (UGC-MMTTC) of the Central University of Jammu has taken place on October 14, 2024, at 10:30 AM in the Department of Electronics and Communication Engineering (DoECE). Hon'ble Vice Chancellor, Prof. Sanjeev Jain, provided his kind support for the conduction of this workshop to understand the role of drone technology in key sectors such as defense and agriculture. Workshop has also been aligned with his optimistic vision to utilize such advanced technologies for the welfare of society and their potential to revolutionize these industries. Prof. Rakesh Kumar Jha, Head of the Department of Electronics and Communication Engineering, Dr. Neelika Arora ( Director of MMTTC), and Dr. Akshay Kumar (Assistant Director of MMTTC) were in the session along with participants, research scholars, students, and faculty members of DoECE. Prof. Jha highlighted the growing importance of drone technology in various sectors and focussed how workshops like this equip students and researchers with essential skills in this emerging field. Dr. Neelika Arora concentrated on “role of MMTTC in promoting interdisciplinary training that reduces the gap between academic knowledge and real-world applications”. The workshop has attracted over 30 participants and research scholars from various parts of Jammu and Kashmir. The workshop was coordinated by Dr. Sunil Datt Sharma (Associate Professor, DoECE) and Dr. Mishbah Shafi (Assistant Professor, DoECE), with the support of Prof. Rakesh Kumar Jha, and other faculty members of DoECE. Specially Dr. Haneet has put her efforts to connect with the Garuda aviation and drona Aviation pvt Ltd.































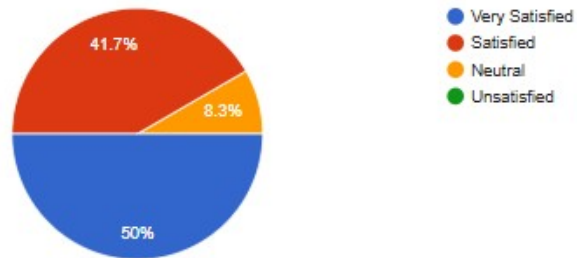
**Feedback received from applicants**

## Feedback form

Overall, how satisfied are you with the workshop?

 [Copy chart](#)

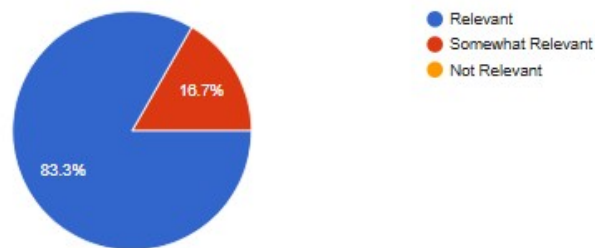
24 responses



How relevant was the workshop content to your professional interests?

 [Copy chart](#)

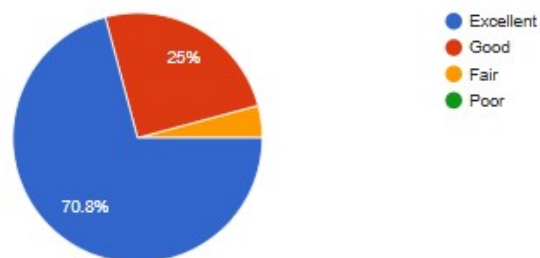
24 responses



How would you rate the presenters in terms of knowledge and delivery?

 [Copy chart](#)

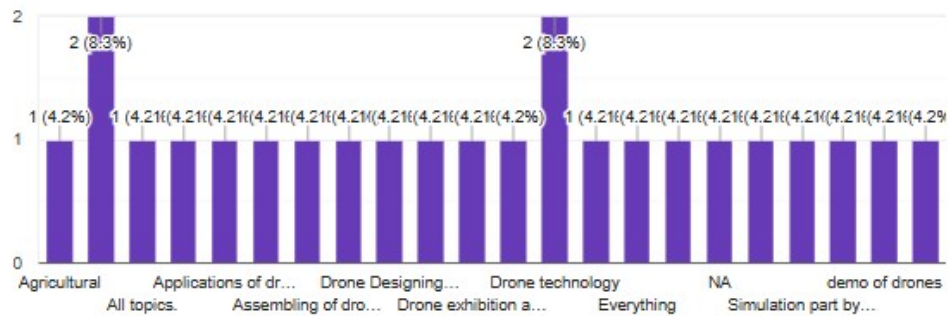
24 responses



### Which topic(s) did you find most valuable?

[Copy chart](#)

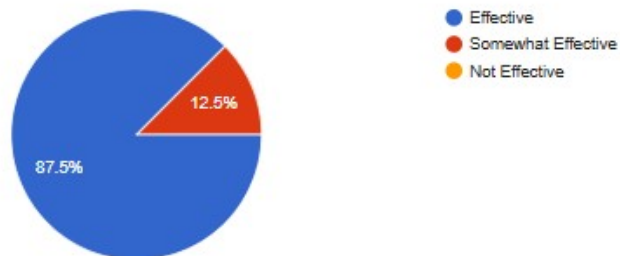
24 responses



### How effective were the hands-on activities or demonstrations during the workshop?

[Copy chart](#)

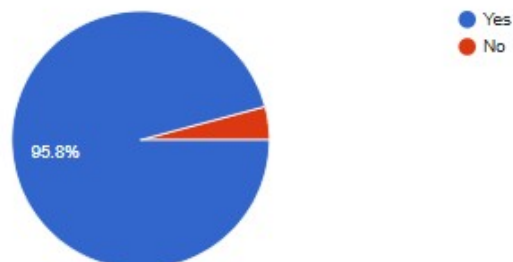
24 responses



### Did the workshop meet your expectations?

[Copy chart](#)

24 responses



## Photograph gallery links

- [https://photos.google.com/share/AF1QipMkjd3-mkSZScKwE81iR18mux\\_7PONcDkv-FY17jqLmXdMO4b11FWEiyWQqiwNr7Q?key=TVNQaFljZzVCSW9jRS04RS1mTDc1WDDfB1J4Um1n](https://photos.google.com/share/AF1QipMkjd3-mkSZScKwE81iR18mux_7PONcDkv-FY17jqLmXdMO4b11FWEiyWQqiwNr7Q?key=TVNQaFljZzVCSW9jRS04RS1mTDc1WDDfB1J4Um1n)
- [https://drive.google.com/drive/folders/1IHIVnzFhBQraLI1Qa4xM\\_9pnVsOSxsHO?usp=share\\_link](https://drive.google.com/drive/folders/1IHIVnzFhBQraLI1Qa4xM_9pnVsOSxsHO?usp=share_link)
- <https://photos.app.goo.gl/fS2RXeJyBrmYZTsNA>
- <https://photos.app.goo.gl/eqG9u6ruvygNnb8L9>

## Social Media News

<https://www.facebook.com/100064113512184/posts/1046335174180257/?mibextid=QwDbR1&rdid=ZGsiVohnVFO5OJdl>

<https://www.facebook.com/share/p/HpAk5yZnLYBXqeN8/?mibextid=QwDbR1>

<https://www.facebook.com/share/K89EEDsPSE6xDsJy/?mibextid=QwDbR1>

<https://www.facebook.com/share/nawDt8nXSbd7S5g6/?mibextid=QwDbR1>

<https://www.facebook.com/share/ro8oSgfrPRqxsGuA/?mibextid=QwDbR1>

## Print News

**FE News**  
15 October · 🌐

Inauguration of One Week Workshop on "Drone Technology and Its Applications" at Central University of Jammu

Jammu, October 15

The inauguration of a one week workshop on "Drone Technology and its Applications" under the Malviya Mission of Teachers Training Centre (UGC-MMTTC) of the Central University of Jammu in the Department of Electronics and Communication Engineering (DoECE). The workshop, organized by the DoECE, is scheduled from October 14 to October 19, 2024. Its primary goal is to provide an in-depth understanding of drone technology and its various applications. Hon'ble Vice Chancellor, Central University of Jammu Prof. Sanjeev Jain, emphasized the transformative role of drone technology in key sectors such as defense and agriculture. He reiterated his vision of utilizing these advanced technologies for the welfare of society and their potential to revolutionize these industries. Distinguished faculty members and guests present at the event included Prof. Rakesh Kumar Jha, Head of the Department of Electronics and Communication Engineering; Dr. Neelika Arora, Director of MMTTC; and Dr. Akshay Kumar, Assistant Director of MMTTC. Prof. Rakesh Jha highlighted the growing importance of drone technology in various sectors and stressed how workshops like this equip students and researchers with essential skills in this emerging field. Dr. Neelika Arora spoke about the role of MMTTC in promoting interdisciplinary training that bridges the gap between academic knowledge and real-world applications. The workshop has attracted over 30 participants and research scholars from various parts of Jammu and Kashmir. The event is being coordinated by Dr. Sunil Datt Sharma (Associate Professor, DoECE) and Dr. Mishbah Shafi (Assistant Professor, DoECE), under the supervision of Prof. Rakesh Kumar Jha, Head of the DoECE.



# Workshop held on drone technology and its applications at CUJ

## ■ STATE TIMES NEWS

JAMMU: One-week workshop on drone technology and its applications was organized by the department of Electronics and Communication Engineering under UGC-MMTTC at Central University of Jammu. The workshop covered several key areas, including drone hardware and software, regulations, and hands-on flying sessions. It also explored a wide range of applications, such as agriculture, security, and environmental monitoring.

The event highlighted the increasing significance of drones in addressing contemporary challenges, particularly in enhancing security operations and conducting infrastructure inspections. The resource persons were called from industries such as Drona Aviation, Techno Zone, and Garuda Aerospace. Garuda Aerospace also conducted a Drone Exhibition session along with flying session.

Vice Chancellor, Prof. Sanjeev Jain graced the event with his kind presence, and he motivated the faculty members, research



*VC Prof. Sanjeev Jain and others during the workshop.*

scholars, participants to enhance the research and development skills in the field of drone technology to solve the various problems of key sectors such as defense and agriculture.

He also reiterated his vision of utilizing these advanced technologies for the welfare of society and their potential to revolutionize these industries.

Prof Yashwant Singh, Registrar, Central University of Jammu, Prof. Rakesh Kumar Jha, Head of Department of Electronics and Communication Engineering, Dr. Neelika Arora, Director of MMTTC, and Dr. Akshay Kumar, Assistant Director of MMTTC was also present at the event. Prof. Jha highlighted the importance of drone technology in different application areas.

Dr. Neelika Arora, Director of MMTTC focused on the role of UGC-MMTTC to conduct Faculty Development Programs/Short term courses/ Refresher courses/ Workshops to promote interdisciplinary training hence reducing the gap between academic knowledge, industry and real-world applications.

In this workshop more than 30 participants registered from various parts of Jammu & Kashmir and all over the country. The workshop was coordinated by Dr. Sunil Datt Sharma, Associate Professor, DoECE) and Co-coordinated Dr. Misbah Shafi Assistant Professor, DoECE.



# One-Week Workshop on Drone Technology and its Applications at Central University of Jammu

NIN NEWS SERVICE  
JAMMU, OCT 21

One-week workshop on drone technology and its applications was organized by the department of Electronics and Communication Engineering under UGC-MMTTC at Central University of Jammu.

The workshop covered several key areas, including drone hardware and software, regulations, and hands-on flying sessions.

It also explored a wide range of applications, such as agriculture, security, and environmental monitoring. The event highlighted the increasing significance of drones in addressing contemporary challenges, particularly in enhancing security operations and conducting infrastructure inspections.

The resource persons were called from industries such as Drona Aviation, Techno Zone, and Garuda Aerospace.

Garuda Aerospace also conducted a Drone Exhibition session along



with flying session. Hon'ble Vice Chancellor, Prof. Sanjeev Jain graced the event with his kind presence, and he motivated the faculty members, research scholars, participants to enhance the research and development skills in the field of drone technology to solve the various problems of key sectors such as defense and agriculture.

He also reiterated his vision of utilizing these advanced technologies for the welfare of society and their potential to revolutionize these industries.

Prof Yashwant Singh, Registrar, Central University of Jammu, Prof. Rakesh Kumar Jha, Head of Department of Electronics and Communication Engineering, Dr. Neelika Arora, Director of MMTTC, and Dr. Akshay Kumar, Assistant Director of MMTTC was also present at the event. Prof. Jha highlighted the importance of drone technology in different application areas. Dr. Neelika Arora, Director of MMTTC focused on the role of UGC-MMTTC to conduct Faculty Development

Programs/Short term courses/ Refresher courses/ Workshops to promote interdisciplinary training hence reducing the gap between academic knowledge, industry and real-world applications. In this workshop more than 30 participants registered from various parts of Jammu & Kashmir and all over the country.

The workshop was coordinated by Dr. Sunil Datt Sharma, Associate Professor, DoECE) and Co-coordinated Dr. Misbah Shafi Assistant Professor, DoECE.



**SITEC**  
SUSTAINABLE INNOVATION TECHNOLOGY EDUCATION CENTRE

**INSTITUTION'S INNOVATION COUNCIL**  
(Established in 2018)

**MALAVIYA MISSION TEACHER TRAINING PROGRAMME**



विश्वविद्यालय अनुदान आयोग  
University Grants Commission  
Quality higher education for all

# CENTRAL UNIVERSITY OF JAMMU

## One Week Workshop on “Drone Technology and its Applications”

(Under UGC- Malaviya Mission-Teachers Training Centre (MM-TTC))

(14th-19th October 2024)

Organized by

Department of Electronics and Communication Engineering

### Objective:

The primary objective of the workshop is to provide basic knowledge of drone technology and its applications to enhance the skills and capacity building of faculty members of Universities and Higher Education Institutions (HEI) through lectures, practical, and interactive sessions under UGC-MMTC of Central University of Jammu.

**Resource Persons:** Experts from IITs, NITs, other esteemed institutes, and industry professionals

### Eligibility for Participation:

Faculty members of Universities / HEIs

**Program duration:** One week

**Registration Fee:** NIL

**Number of participants:** 30

**Registration Link:** [Click here](#)

**Last Date of Registration:** 10-10-2024



### Patron :

Prof. Sanjeev Jain  
Hon'ble Vice Chancellor



Dr. Neelika Arora  
Director, UGC-MMTC,  
Central University of Jammu



Prof. (Dr.) Rakesh Kumar Jha  
HOD, DoECE,  
Central University of Jammu



**Coordinator**  
Dr. Sunil Datt Sharma  
Associate Professor, DoECE  
Central University of Jammu



**Co-Coordinator**  
Dr. Misbah Shafi  
Assistant Professor, DoECE  
Central University of Jammu

**Contacts:** sunil.ece@cuammu.ac.in - 9826868418, misbah.ece@cuammu.ac.in - 9469880266