

# **Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri**

## **Remote Pilot Training Organization (RPTO)**

**Central Campus, MPKV Rahuri, Ahmendagar 413722, Maharashtra (IN)**



**FIRST AGRICULTURAL UNIVERSITY TO ESTABLISH  
REMOTE PILOT TRAINING ORGANIZATION  
UNDER DRONE RULES 2021**





## **About us**

The Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri is the premier Agricultural University in Maharashtra that renders services to the farmers through Education, Research and Extension Education. Mahatma Phule Krishi Vidyapeeth, Rahuri was established in 1969 for the western Maharashtra having jurisdiction spread over 10 districts.

The project entitled Centre for Advanced Agricultural Science and Technology (CAAST) on Climate Smart Agriculture and Water Management (CSAWM)" is being implemented in Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra under World Bank Sponsored National Agricultural Higher Education Project (NAHEP) of Indian Council of Agricultural Research (ICAR), New Delhi, Government of India, since 2018 with objectives of developing the capacity amongst the faculties, students, practitioner, entrepreneur etc.

Drone aka. Unmanned Aerial Vehicle (UAV) is one of the formidable technologies that have found potential application in agriculture. Drones have two major applications in agriculture. These are i) Inputs Application and ii) Resource mapping. The inputs such as nutrients, fertilizers, chemicals (insect & pest) can be sprayed; and similarly, the seeding can also be performed with drones. The Government of India has promoted the use of drones in agriculture. Drone has huge potential and its use in agriculture can ignite a big change in improving the efficiency of agriculture. As a result, there will be a huge demand for trained manpower in drones.

CAAST-CSAWM, MPKV Rahuri has developed the laboratory for the application drones in agriculture. As part of promoting the use of drones in agriculture and developing entrepreneurship opportunities to young generation, the organization of training, certificate course and demonstration on drone technology is essential. Drone Pilot Training is now mandatory to fly ANY DRONE above the weight of 250 gms in India. Operating a drone without the mandatory remote pilot certificate can result in heavy fines, confiscation of the drone you are operating and possibly even imprisonment.

MPKV, Rahuri is India's first Agricultural University to establish Directorate General of Civil Aviation (DGCA) approved Remote Pilot Training Organization (RPTO) under UAS Rules 2021.

## **Mission**

Our mission is to provide the entrepreneurship opportunities to young generation by giving remote pilot training and enhancing the use of drones in agriculture for input application and resource mapping.

## **Vision**

Our vision is to generate skilled manpower required for agricultural drone, so as to take this cutting edge technology to each and every farmer.







## DGCA-CERTIFIED – RPAS Training Program



### Theory classes

- DGCA Rules and Regulations
- UAS operator registration and Authorizations
- Basic principles of flight
- Fixed wing / Rotary wing / Hybrid Operations
- UAS integration and Maintenance
- Payload Utilization
- Drone Data Analysis
- Emergency Protocol and Procedures
- Weather and Metrology
- ATC Procedures and Radio Telephony
- Digital Sky familiarization
- UAS registration



### Ground Training Classes

- Hands-on UAS Training
- Assembly maintenance and handling
- Ground Control Station (GCS) Training
- Flight Logging
- Troubleshooting



### Simulator Training Classes

- Identical UAS flight training
- Multiple codes
- Various atmospheric conditions
- Dynamic wind conditions
- Numerous shapes and pattern of flight
- Emergency Recovery



### UAS Flight Training Classes

- Pre-flight training
- Flight Training accompanied by Instructor (Dual transmitters)
- UAS flight manoeuvres
- Take-off and landing
- Hovering
- Flying at various conditions, numerous shapes and pattern of flight
- Emergency Recover and Landing Training
- Post flight training



### Auxiliary Sessions

- BVLOS Experiment & Night flying operation
- Concept of Operations
- Test Procedure
- Special operations Risk Assessment

### Exclusive Session: Practical Flying Session of Agricultural Spraying Drone







## Course duration

05 days DGCA approved drone training

- 2 days of theory lectures
- 1 day on simulator and Lab session
- 2 days of practical flying sessions

Exclusive 2 days agricultural drone flying experience and training



## Facilities and Infrastructure

- Highly skilled and experienced Instructors
- State of art drone laboratory with assembly and dismantling kit
- Latest flight simulator, Smart class rooms and lecture hall
- DGCA approved small category drones
- On-campus Lodging and boarding facility



## Eligibility

- 10<sup>th</sup>/SSC pass
- 18-65 years of age
- Valid Indian Passport



## Documents required

- 10<sup>th</sup>/SSC class certificate and higher qualification certificate self-attested
- Passport self-attested
- Aadhar card self-attested which is linked with email and mobile number
- Medical certificate
- Four passport size pictures white background and one stamp size photo



## Course fee

Sr.No.	Particulars	Individual Fee (Rs.)
1	Students, Farmers, Farmers Producer Organizations, NGOs, SHGS	40,000
2	Government officers/ staff (*Group of minimum 5)	45,000 (* 40,000)
3	Industry person or any other individual (# Group of Industry under MoU with minimum 5 candidates per batch)	55,000 (# 45,000)

Lodging and boarding is responsibility of the candidates, however guest house facility will be provided (as per availability on payment basis)



## Terms and condition

1. **Students:** Must be registered student of any college (bonafide certificate should be submitted as proof)
2. **Farmer:** Must have authorized proof of agriculturist by competent authority.
3. **Government officers/staff:** Office ID, nomination letter and relieving order from competent authority.
4. **Farmers Producer Organizations, NGOs, SHGS:** Should have valid registration proof and nomination letter from the organization.
5. **Government official group of minimum 5:** Office ID, nomination letter and relieving order from competent authority.
6. **Official group of Industry having MOU:** Nomination letter and relieving order from competent authority.



## Schedule of Batches

Registrations open for following batches:

- 07-13, May 2023
- 27 May to 02 June 2023
- 10-16, June 2023
- 24-30, June 2023



## Mode of payment: NEFT/RTGS/IMPS or Account transfer

**Account Name:** Mahatma Phule Krishi Vidyapeeth

**Account No:** 40676336896

**IFS CODE:** SBIN0003239

**Bank:** State Bank of India

**MICR CODE:** 413002672

**Branch:** MPKV, Rahuri





### **Small category rotary wing drone**

Drone in small category have maximum all-up weight of 2 to 25 kg. The course comprise of 5 days intensive training of drone technology with practical approach of assembly and dis-mantling, skill sets required to a proficient drone pilot and prepare students to operate small category drone in all situation specially in emergency. Students will be familiar with procedure of mission planning using different applications, tools, equipment and preventive maintenance.



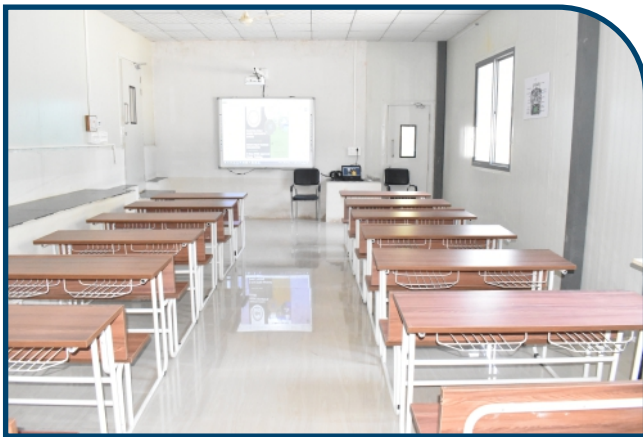
### **RPTO Infrastructure**



**R&D Laboratory**



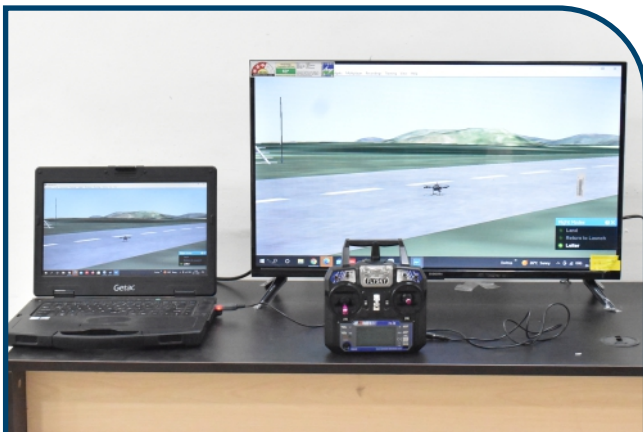
**Maintenance Laboratory**



**Lecture hall**



**Library**

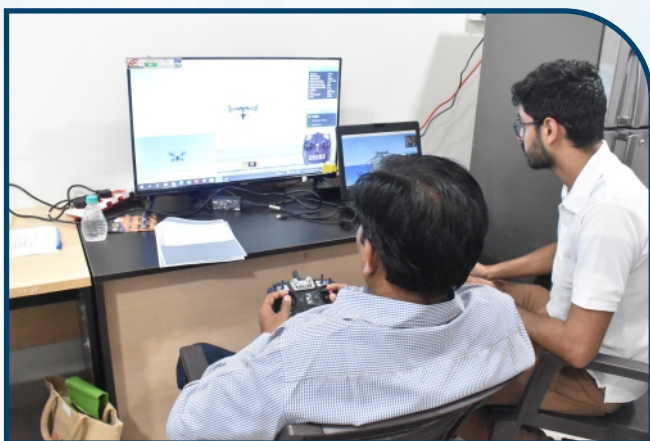


**Simulator room**



**Hyper spectral imaging Laboratory**









## Patron

- **Dr. Prashantkumar G. Patil**  
Vice-Chancellor, Mahatma Phule Krishi Vidyapeeth, Rahuri-413722 (MS), India.



## RPTO Team members

- **Dr. S.D. Gorantiwar**  
Director of Research, Head (Ag. Engg.) & PI (CAAST-CSAWM), MPKV, Rahuri-413722 (MS), India.
- **Dr. M.G. Shinde**  
Co-Principal Investigator (CAAST-CSAWM) and Professor (SWCE), MPKV., Rahuri-413722 (MS), India.



## RPTO Officials

- **Dr. S.M. Nalawade**  
Accountable Manager, Chief Drone Instructor & Head, Dept. of FMPE, MPKV-RPTO, MPKV, Rahuri-413722 (MS)  
Email: smnalawade1975@gmail.com, Mob: +91-9422382049
- **Mr. Rahul Ambegaonkar & Ms. Dhriti Shah**  
GroundZero Aerospace, Mumbai, Email: groundzerodrones@gmail.com, Mob: +91-9867750035
- **Er. Tanay Pradhan**  
Drone Instructor, MPKV-RPTO, MPKV, Rahuri-413722 (MS)



## Agriculture Drone Team

- **Dr. S.A. Kadam**  
Associate Professor (IDE) & Team Member (CAAST-CSAWM), MPKV, Rahuri-413722 (MS).  
Email: sunil21075@gmail.com, Mob: +91-9403608302
- **Er. Nilkanth More**  
Technical Assistant (Mechanical), CAAST-CSAWM, MPKV., Rahuri-413722 (MS).  
Email: tusharmore.111@gmail.com, Mob: +91-8888770282
- **Dr. G.B. Bhanage**  
Research Associate (FMPE), CAAST-CSAWM, MPKV., Rahuri-413722 (MS).  
Email: gbhanage1588@gmail.com, Mob: +91-8855094029







Government of India /भारतसरकार  
Directorate General of Civil Aviation /महानिदेशकनागरविमाननकार्यालय  
Opp: Safdarjung Airport /सफदरजंगऐयरपोर्टकेसामने  
New Delhi – 110003 /नईदिल्ली-११०००३

**CERTIFICATE OF AUTHORISATION**  
**प्राधिकार प्रमाणपत्र**

File No. : DGCA-31036/49/2022-DRONE-Dte RPTO Authorisation No.:25/2022

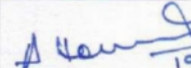
In accordance with Rule 39 of the Drone Rules 2021, Authorisation for the training organisation is hereby granted to

**Mahatma Phule Krishi Vidyapeeth,**  
**Rahuri, Ahmednagar, Maharashtra 413722**

as Remote pilot Training Organisation (RPTO) for conducting Remote Pilot Training Course specified in column no. 4 of the table below with main base of operations at

**Mahatma Phule Krishi Vidyapeeth, Agricultural Research Station, Chas,**  
**Ahmednagar, Maharashtra 414005, India**

All the operations shall be conducted in accordance with the approved/accepted Training and Procedure Manual.

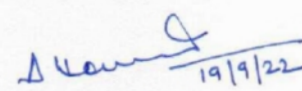
Sl. No.	Validity		Scope of approval	Signature
	From	To		
(1)	(2)	(3)	(4)	(5)
1	19.09.2022	18.09.2032*	Conditions : VLOS Category: Rotorcraft Sub-Category: RPAS & Autonomous Class : Small	 19/9/22 Dr. Jitender Loura (Deputy Director)

**Conditions of Authorisation:**

1. This authorization is limited to that specified in the scope of the Training and Procedure Manual and requires compliance laid down thereto.
2. This authorization is valid whilst the Organization remains in compliance with the Drone Rules 2021, applicable CAR and any other circulars/directions issued under the said rules by DGCA from time to time
3. This authorization will remain valid for the duration as specified above, subject to \*lease validity, unless the authorization is surrendered, superseded, suspended or cancelled.
4. This authorization is non-transferable.

Date of Original issue: 19<sup>th</sup> Sep, 2022

Stamp & Signature of Issuing Authority

  
19/9/22  
डा. जितेंद्र लौरा / Dr. Jitender Loura  
उप निदेशक (प्रचालन) / Dy. Director (Operations)  
नागर विमानन महानिदेशकालय  
Directorate General of Civil Aviation  
नागर विमानन विभाग / Ministry of Civil Aviation  
भारत सरकार / Govt. of India  
नई दिल्ली / New Delhi-110003

**Contact Us**

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**Mr. Rahul Ambegaonkar Mob:+91-9867750035**

**Mahatma Phule Krishi Vidyapeeth**

**Remote Pilot Training Organization**

**Tal. Rahuri-413 722, Dist. Ahmednagar (MS), India**

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