INTERNATIONAL OFFLINE TRAINING PROGRAMME

AGRICULTURAL PRACTICES USING DRONES: PLAN, DESIGN, BUILD, AND FLY TRAINING PROGRAM

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23 October – 2 November, 2025

Indian Institute of Technology Kanpur, Uttar Pradesh, India

AARDO

Delhi, India

INTRODUCTION

Theme of the programme	- Agricultural Practices using Drones: Plan, Design, Build, and Fly Training Program
Sponsoring Organisation	- African Asian Rural Development Organization (AARDO) www.aardo.org
Training Institute (Host)	- Indian Institute of Technology Kanpur (IIT Kanpur) www.iitk.ac.in
Duration	- 23 October - 02 November, 2025
Participation	- Senior or mid-level government officials
Deadline for Application	- 30 September 2025

BACKGROUND

The Indian Institute of Technology (IIT) Kanpur, renowned for its excellence in technological research and education, has partnered with the African-Asian Rural Development Organization (AARDO) to launch a transformative course: "Agricultural Practices using Drones: Plan, Design, Build, and Fly Training Program." This initiative aims to revolutionize rural agriculture in Africa and Asia through advanced drone technology.

Traditional farming methods often rely on manual labor for crop monitoring, soil analysis, and pest control—processes that are time-consuming and inefficient. Farmers face issues like uneven crop growth, delayed disease detection, and inefficient use of resources due to lack of precise data.

Drones, or Unmanned Aerial Vehicles (UAVs), offer real-time insights into crop health, soil conditions, and field variability. These insights enable precision agriculture—targeted use of fertilizers and pesticides, optimized irrigation, and timely harvesting—ultimately improving yields and efficiency.

This course equips participants with practical skills to plan, build, and operate drones for agricultural use. Covering drone hardware, flight dynamics, software, and data analysis, the program includes hands-on training in drone construction, flight path programming, and aerial image interpretation for smarter farming decisions.

ABOUT THE COURSE

OBJECTIVES OF THE PROGRAMME

• To raise participants awareness on the use of drones in agriculture.

• To educate the trainees regarding the planning needed for the use of drones in agriculture.

• Understand various methods of designing a drone.

• Hands-on training on design and building a drone.

• Training on how to operate the drone.

Course Contents

1. Introduction, Drones in Agriculture

2. Regulations and Ethics

3. Designing of drone

4. Building of drone

5. Pre-flight Preparations

6. Field Trip

7. Flight Maneuvers

8. Emergency Procedures

9. Maintenance and Troubleshooting

DETAILS OF THE COURSE

ESSENTIAL QUALIFICATIONS

- A bachelor's degree and a minimum of five years of relevant field experience are required.
- Proficiency in spoken and written English is mandatory, as the medium of instruction is exclusively in English, and translation services into other languages are not provided.
- Applicants should have good physical and mental health to be able to complete the training course successfully.
- Applicants should be below 50 years of age, with no participation in any AARDO's offline training program over the preceding two years.

Target Audience

The training programme will be attended by mid and senior-level officials working in the relevant field in their respective countries. Resource persons from the host Institute and other institutions, having rich experiences on the subject will be invited to share their experiences and expertise with the participants.

MEDIUM OF COMMUNICATION

The medium of communication is English only. Participants to have a proficient working knowledge of English for effective communication and engagement.

WhatsApp COMMUNICATION

WhatsApp communication will be established among the participants, the host institute, and AARDO to enhance communication speed and information sharing.

DETAILS OF THE COURSE

HOW TO APPLY

Step 1: Log on to the link: https://aardo.org/aardot.php

Step 2: Fill up the details and submit. Take print out of the filled in application form.

Step 3: Applicants are required to sign their applications and send them along with the recommendation letter of the Nodal Ministry of AARDO to our email: iec@aardo.org

VISA & AIR TICKETS

AARDO will assist in obtaining visa from Missions of India located in respective countries of the participants. Air Tickets will be issued by AARDO on confirmation of Visa to attend the programme. Following the acceptance of the nominee(s), round-trip economy class air tickets will be issued for the travel of the Candidate(s) to Lucknow/New Delhi, India and back.

CERTIFICATE

Upon successful completion of the training program, participants will receive a certificate bearing the signatures of both AARDO and IIT Kanpur, providing authentication.

IMPORTANT NOTES

- Application without recommendation of the AARDO's Nodal Ministry in participant's country will not be considered.

- Application, duly completed, must reach the AARDO Secretariat before or on the closing date, **30 September 2025**.

- Due to limitation of number of participants, only selected candidates would be intimated through the Nodal Ministry and AARDO's Centres of Excellence.

ABOUT THE HOST TRAINING INSTITUTE (IIT-Kanpur)

The Indian Institute of Technology (IIT) Kanpur, established in 1959, is one of India's premier institutions for higher education and research in engineering, science, and technology. Located in Kanpur, Uttar Pradesh, IIT Kanpur is renowned for its academic excellence, cutting-edge research, and innovation. The institute offers undergraduate, postgraduate, and doctoral programs across various disciplines, fostering an environment of intellectual rigor and interdisciplinary collaboration. Equipped with state-of-the-art facilities, IIT Kanpur emphasizes hands-on learning and practical application of knowledge. Its faculty includes leading experts and researchers committed to advancing knowledge and solving real-world problems. IIT Kanpur's contributions to technology, industry, and society have earned it a reputation as a leader in education and a catalyst for technological progress in India and beyond.

For international students, IIT Kanpur offers a vibrant, inclusive, and intellectually stimulating environment. The institute's Office of International Relations facilitates a smooth transition through support with admissions, accommodation, and academic guidance. With modern hostels, cultural festivals, and student-led clubs, international students find ample opportunities for engagement both inside and outside the classroom. The campus promotes global exposure through student exchange programs, joint research initiatives, and international conferences—making IIT Kanpur not just a hub for academic excellence, but a gateway to global collaboration and cross-cultural learning.

PROGRAM COORDINATORS - IIT KANPUR

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ABOUT AARDO

The AFRICAN-ASIAN RURAL DEVELOPMENT ORGANIZATION is a rural centric inter-governmental autonomous organization located at 2, State Guest Houses Complex, Chanakyapuri, New Delhi 110 021, India .

African Asian Rural Development Organization is mandated to develop understanding among members for better appreciation of each other's problems and to collectively explore, opportunities for coordination of efforts for the welfare and eradication of thirst, hunger, illiteracy, disease and poverty amongst rural people in the African-Asian region. The Organization comprises thirty six (36) members, which include thirty one (32) countries namely, Burkina Faso, Egypt, Ethiopia, Eswatini, Gambia, Ghana, Kenya, Liberia, Libya, Malawi, Mauritius, Morocco, Namibia, Nigeria, Sierra Leone, Sudan, Tunisia and Zambia from Africa, and Bangladesh, R.O. China (Taiwan), India, Iraq, Jordan, R.O. Korea, Lebanon, Malaysia, Oman, Palestine, Pakistan, Sri Lanka, Syria and Yemen from Asia, as the full members, and Korea Rural Community Corporation (KRC), R.O. Korea, the Agricultural Bank of Sudan (ABS), Sudan, Ekiti Chamber of Commerce, Industry, Mines & Agriculture (EKICCIMA), Nigeria and Economic and Social Development Center (ESDC), Palestine as Associate Members.

AARDO is promoting South-South Triangular cooperation in the domain of agricultural and rural development. As such, AARDO is championing and advocating more science to rural societies for inclusive transformation of rural areas in Africa and Asia.

PROGRAMME COORDINATORS - AARDO

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