



# Chhatrapati Shahu Ji Maharaj University, Kanpur

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INDO RUSSIA 'INNOPRAKTIKA' TECHNOLOGY HUB

&

GEOSCAN

&

KALAM SPS RESEARCH CENTRE

ORGANIZES

## Unmanned Aerial Vehicle (UAV) Programme



Professional UAV training programs at Chhatrapati Shahu Ji Maharaj University, Kanpur combining hands-on drone piloting, aerial data processing, and real-world industry skills.

COURSE OFFERED

## Professional Drone Pilot Certification & Aerial Survey & Post-Processing

UAV Training  
Program  
Registration form



SCAN NOW TO GET REGISTER



## About

# Chhatrapati Shahu Ji Maharaj University (CSJMU) & Chhatrapati Shahu Ji Maharaj Innovation Foundation



## About Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur

Established in 1966, CSJMU, Kanpur is a UGC-Recognized state university and a leading center of higher education in Uttar Pradesh. As an affiliating university for seven districts—Kanpur Nagar, Kanpur Dehat, Unnao, Farrukhabad, Kannauj, Etawah, and Auraiya, It plays a key role in education, skill development, and regional growth. With 600+ affiliated colleges, the University has

strong outreach in rural and semi-urban areas, enabling effective implementation of large-scale training and capacity-building programs. CSJMU offers diverse academic programs in Agriculture, Science, Engineering, Management, Commerce, and Life Sciences, while actively supporting national initiatives like Skill India, Digital India, and Aatmanirbhar Bharat.

## About CSJM Innovation Foundation (CSJMIF)

CSJM Innovation Foundation (CSJMIF) is a Section 8 not-for-profit organization and Technology Business Incubator promoted by Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur. The Foundation is dedicated to fostering Innovation, Skill Development, Entrepreneurship, and Capacity Building to enhance employability and livelihood generation.

Leveraging the academic strength and outreach network of CSJMU and its 600+ affiliated colleges, CSJMIF is well-positioned to mobilize participants and deliver large-scale, decentralized training and capacity-building programs across multiple districts of Uttar Pradesh, particularly in rural and semi-urban regions.

The Foundation has experience in implementing structured, outcome-oriented programs in collaboration with academic institutions, industry partners, and government agencies. Its initiatives emphasize practical learning, field exposure, and real-world application to maximize impact.

CSJMIF follows a decentralized and cost-effective implementation model by utilizing institutional infrastructure and partner networks for efficient delivery. The Foundation also ensures continuous monitoring, evaluation, and impact assessment to maintain transparency, accountability, and measurable outcomes.

## Message From of Hon'ble Vice Chancellor



CSJMU has demonstrated its capacity to implement large-scale training and development programs in collaboration with government agencies and leading institutions. Its decentralized institutional framework allows affiliated colleges to function as training, outreach, and coordination centers, making program delivery efficient and cost-effective. This unique strength positions the University as an ideal partner for impactful initiatives under schemes such as Rashtriya Krishi Vikas Yojana, aimed at improving agricultural skills, livelihoods, and inclusive rural growth.

**HON'BLE VICE CHANCELLOR  
PROF. VINAY KUMAR PATHAK  
CSJM UNIVERSITY, KANPUR**

Adding another milestone to its journey of innovation and excellence, CSJMU is proud and happy to launch the Drone (UAV) Lab in collaboration with Geoscan, Russia and SPS Kalam Research Centre. This Indo-Russian technology collaboration marks a significant step toward advanced research and development in unmanned aerial systems. The lab will provide students and researchers with world-class opportunities for hands-on learning in drone design, aerial mapping, remote sensing, surveillance, and AI-driven autonomous systems. Through this initiative, CSJMU continues to strengthen its commitment to technological advancement, industry-oriented research, and preparing future-ready professionals for emerging global opportunities and challenges in science, technology and innovation worldwide.





## About Industry Partners

### Indo-Russia 'Innopraktika' Technology Hub

Indo-Russia 'Innopraktika' Technology Hub, jointly established by Innopraktika of Russia and the Chamber for Indo-Russo Technology Collaboration (CIRTC) of India to strengthen scientific and technological cooperation between the two nations.

The Hub serves as a strategic platform for promoting bilateral research partnerships, academic collaboration between universities and students, cultural and linguistic integration, and innovation-driven industrial linkages. It supports joint R&D projects in frontier areas of common interest — connecting researchers, entrepreneurs, universities, and industries to deepen the knowledge economy partnership between India, Russia, and the Global South.

### Kalam SPS Research Centre

Dr APJ Abdul Kalam Research Foundation popularly known as “Kalam Foundation” is a Trust, registered under Indian Trust Act, 1882 inspired by Former President, Bharat Ratna Dr. APJ Abdul Kalam, dedicated to the integrated & sustainable development of India according to Dr. Kalam’s dream through the intervention of science, engineering and technology. Kalam Foundation today has 15 state units and a few overseas units as well. Eminent scientists, academicians, policy makers, and social workers are the torch bearers of the vision of Dr. APJ Abdul Kalam.

### Geoscan

Geoscan Group is a pioneering Russian technology enterprise specialising in the design and manufacture of unmanned aerial systems, miniature satellites (CubeSats), avionics, wireless communication systems, and indoor navigation devices. Geoscan also delivers world-class services in aerial photography, multispectral and thermal imaging, airborne laser scanning, and geological exploration.

Geoscan's record-breaking achievements include orchestrating the world's greatest drone show, deploying 2,198 drones above St. Petersburg to commemorate the 75th anniversary of Victory Day, undertaking the world's most extensive UAV mapping project (a complete 3D model of the Moscow region from 5,000,000 aerial images), and creating the world's largest 3D model of a cultural heritage site, digitally reconstructing the ancient city of Palmyra, Syria.

## COURSES OFFERED

### Fly. Survey. Lead.

**Professional UAV training programs at Chhatrapati Shahu Ji Maharaj University – combining hands-on drone piloting, aerial data processing, and real-world industry skills.**

The infographic displays two course options side-by-side. The left option is 'CERTIFICATE OF PROFICIENCY Professional Drone Pilot Certification', which includes 40 hours of basic and 72 hours of advanced training. It covers theory sessions, ground preparation, flight practice, and results in a certificate and license. The price is starting from ₹ 27,000. The right option is 'AERIAL SURVEY Aerial Survey & Post-Processing', which consists of two 36-hour modules. It covers mission planning, photogrammetry fundamentals, and real-time data processing using Agisoft Metashape software. The price is per module from ₹ 30,000. Both courses feature images of a drone pilot and a drone in flight.

#### What students learn:

Students enrolled in this program gain both theoretical knowledge and practical expertise in operating Unmanned Aerial Vehicles (UAVs), with a strong focus on safety, planning, and data handling. The curriculum is designed to prepare them for real-world drone operations across industries such as surveying, agriculture, logistics, defense and aerial photography.

#### 1. Organising and Executing Flights of Multirotor Pioneer Mini and Basic UAV's

Students learn how to prepare, plan, and conduct drone flights using multirotor platforms such as the Pioneer Mini and other basic UAV models. This includes:

- Pre-flight inspection and system checks
- Understanding drone components and controls
- Manual and autonomous flight operations
- Take-off, landing and in-flight maneuvering techniques
- Emergency procedures and troubleshooting during missions
- Compliance with operational guidelines and regulations

This practical training ensures students develop confidence in handling UAV's safely and efficiently.

## 2. Working with Specialised Software for Mission Planning and Data Analysis

Students are introduced to industry-relevant software tools used for planning drone missions and interpreting collected data they learn to:

- Design and simulate flight paths for mapping or inspection missions
- Configure mission parameters such as altitude, speed and overlap
- Monitor live telemetry and flight performance
- Process aerial images and sensor data
- Generate maps, 3D models and analytical report

This helps students understand how software enhances precision and productivity in UAV operations.

## 3. Office Work on Processing UAV Data

Beyond flying drones, students learn the post-flight office-based tasks required to turn raw data into useful information. this includes:

- Organising and storing flight logs and mission records
- Uploading, sorting and managing aerial imagery or video footage
- Data cleaning, Processing Preparing reports, presentations and documentation
- Using GIS and other analytical tools for interpretation

## 4. Fundamentals of Air Navigation, Aerodynamics and Meteorology

Students build a strong theoretical foundation in aviation principles that directly affect UAV performance and safety topics include:

- Basics of airspace and navigation systems
- Reading maps, coordinates and flight routes
- Principles of lift, thrust, drag and weight
- How weather conditions like wind, rain and temperature affect flights
- Interpreting weather forecasts and planning accordingly
- This knowledge enables students to make informed operational decisions.

## 5. Flight Safety Management Systems

Safety is a critical component of UAV operations. Students are trained in the principles and practices of aviation safety management including:

- Risk identification and hazard assessment
- Safety protocols before, during and after flight
- Emergency response planning
- Incident reporting and analysis
- Regulatory compliance and ethical operation

## HOW STUDENTS BENEFIT



### Everything You Gain From This Program

#### Hands-on Flight Experience with Real Geoscan UAV's

Get practical exposure to operating advanced Geoscan UAV systems right on campus. You will train with real drone platforms, including the multirotor Pioneer Mini and Basic models, gaining firsthand experience in flight planning, takeoff and landing procedures, navigation and mission execution. This hands-on learning approach helps you build confidence in handling professional UAV equipment and understanding real-world drone operations.

#### Practical Learning with Industry-Grade Software

Develop technical expertise using professional tools such as Agisoft Metashape, one of the leading software solutions for photogrammetry, 3D mapping and post-processing. Learn how to transform aerial images into accurate maps, 3D models and geospatial data products. environmental monitoring.

You will also gain valuable experience in image alignment, point cloud generation, orthomosaic creation and data analysis—skills that are highly valued in industries like surveying, agriculture and construction.

#### Industry-Relevant Skills for Future Careers

By combining practical drone operation with advanced software training, this program equips you with a complete workflow understanding—from data capture in the field to professional post-processing and analysis. These in-demand skills can open career opportunities in emerging sectors such as drone technology,

# Build Expertise Across the Top 5 Career Fields in Drone Technology



01



## DATA & ANALYTICS

Learn how to collect, process, and interpret aerial data captured by drones. Gain hands-on experience with mapping, surveying, photogrammetry, GIS tools, and data visualization to support industries such as construction, mining, urban planning, and environmental monitoring.

02



## INSPECTION & MAINTENANCE

Understand how drones are used for industrial inspections and asset monitoring. Train in inspecting infrastructure like power lines, pipelines, telecom towers, bridges, and solar farms, while also learning drone maintenance, troubleshooting, and repair fundamentals.

03



## OPERATIONS & AGRICULTURE

Explore the use of drones in agriculture, logistics, and field operations. Learn crop health analysis, precision spraying, field mapping, and operational planning for sectors such as farming, delivery services, disaster response, and surveillance.

04



## TECHNICAL & ENGINEERING

Build strong technical knowledge in drone systems and engineering principles. Study UAV design, aerodynamics, electronics, flight control systems, sensor integration, and software applications to prepare for technical and development-oriented roles.

05



## REGULATORY & STRATEGIC ROLES

Gain insights into drone laws, aviation regulations, compliance standards, and strategic business applications. Learn about DGCA regulations, airspace management, safety protocols, and how drone technology is shaping industries and government operations.

ONE TECHNOLOGY. ENDLESS POSSIBILITIES.

HIGH GROWTH  
CAREERS

HANDS-ON  
EXPERIENCE

REAL-WORLD  
IMPACT

FUTURE-READY  
SKILLS

DIVERSE INDUSTRY  
OPPORTUNITIES

## Career Opportunity

### Pre-Placement Interview for Top Performers

Outstanding students in these programs may be considered for a Pre-Placement Interview (PPI) with partnering organisations, subject to performance during the course, assessments, and availability of positions. We believe the best talent deserves a head start — and we are committed to recognising excellence and opening doors to meaningful careers in the rapidly growing UAV industry.

Note: PPIs are offered at the discretion of the partner organisation based on internal policies, student performance and available openings. This is not a guaranteed placement.

### WHO SHOULD APPLY ?

**CHOOSE YOUR PATH. SOAR INTO THE FUTURE.**



#### DRONE PILOT TRACK

**Open to All Backgrounds**

Any student (school/colleges) with a curiosity for technology and well developed self skills is welcome to enrol. No prior aviation or engineering background is required — if you are passionate about technology, this track is built for you.

-  Interest in technology
-  Any academic background.
-  Well developed soft skills



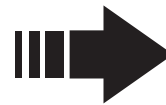
#### AERIAL SURVEY TRACK

**Science Background Preferred**

Students from aeronautical engineering, data science, civil engineering (especially pre-requisite science courses) will find this track particularly aligned with their existing knowledge. Professionals and researchers are also welcome.

-  Aeronautical / Civil engineering
-  Data science / GG backgrounds.
-  Researchers & working professionals

## UAV Training Program Registration Form



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# CHHATRAPATI SHAHU JI MAHARAJ INNOVATION FOUNDATION

Innovate • Inspire • Impact



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