Garuda aerospace

GSFC UNIVERSITY EDUCATION RE-ENVISIONED An ISO 9001:2015 Certified

GUIITAR COUNCIL

DRONE
TRAINING
PROGRAM

About GSFC University

GSFC University is recognized under the Gujarat Private University (Second Amendment) Act, 2014 and is established by the GSFC Education Society - an initiative of Gujarat State Fertilizers and Chemicals Ltd, six decades old industrial giant, to continue the tradition of serving the community in multiple ways. The vision behind establishing this distinct University is societal development through relevant and cutting edge knowledge in frontier areas of professional growth.

About GUIITAR Council:

The GU Incubation Innovation Technology and Applied Research (GUIITAR) Council, established by GSFC University in Vadodara, is dedicated to promoting and supporting creativity, innovation and entrepreneurial spirit among young minds and innovators. The GUIITAR Council is registered under Section 8 of the Companies Act, 2013. With the support of GSFC University, the GUIITAR Council has set up an Advanced Drone Lab to foster exploration and research in drone technology, aiming to uncover new applications and provide support to students, startups and researchers.

About Garuda Aerospace Pvt. Ltd.

Garuda Aerospace Private Limited is a drone startup company based in Chennai, India established in 2015 by Agnishwar Jayaprakash, a young entrepreneur and an Asian gold medalist swimmer. Garuda is approved by the Directorate General of Civil Aviation (DGCA) in India. Garuda Aerospace is India's number 1 Atma Nirbhar Drone startup where 100 drones were simultaneously Launched by PM Modi ji in 100 locations.

Skill Development

GSFC University and Garuda Aerospace Pvt. Ltd. have collaborated to initiate skill development training in drone technology. Initially, they will offer programs for Drone Technicians and Drone Pilots, with plans to introduce various certificate programs in the future.

Certificate Courses:

1. COURSE NAME: BASIC DRONE TECHNICIAN TRAINING PROGRAM

About Training Program: For a basic drone technician training program, the focus should be on providing foundational knowledge and skills necessary for the maintenance, repair and basic operation of drones.

- **Course Duration:** 03 Days with 07 hours per day
- **Course Fees:** ₹3000/- (18% GST Additional)
- **Keynote Speakers:** From Garuda Aerospace Pvt. Ltd, Chennai and GSFC University
- **Who can Participate:** Students, faculty and anyone who wishes to have a career in this field
- **Entry Qualification:** Passed 10th class examination

COURSE CONTENT

1. Introduction to Drones
- Overview of Drone Technology: History, evolution, and types of drones.
- Applications: Common uses in various industries (e.g., photography, agriculture, surveying etc).

2. Basic Drone Components
- Airframe: Basic structure and materials.
- Motors and Propellers: Functions and maintenance.
- Flight Controller: Role in drone operation and basic setup.
- Battery Systems: Types, charging and care.
- GPS and Sensors: Basic functions and importance.

3. Basic Drone Assembly and Repair
- Assembling a Drone: Step-by-step guide to putting together a basic drone.
- Common Issues: Identifying and troubleshooting common problems.
- Routine Maintenance: Regular checks and care to keep drones in good working condition.

4. Basic Flight Mechanics and Controls
- Flight Mechanics: How drones fly and the principles of movement.
- Remote Controllers: Basic operation and control functions.
- Flight Modes: Understanding different flight modes (e.g., GPS, manual).

5. Safety and Regulations

- Basic Safety Practices: Pre-flight checks, safe flying practices and emergency procedures.
- Regulatory Overview: Introduction to local and national regulations for drone operation.

6. Practical Hands-On Training

- Flight Practice: Basic flight exercises to develop handling skills.
- Assembly Practice: Hands-on experience assembling and disassembling drones.
- Maintenance Practice: Performing basic maintenance and repairs.

7. Software and Firmware Basics

- Firmware Updates: How to update firmware on basic drones.
- Basic Software Use: Introduction to flight planning and data management tools.

8. Basic Problem-Solving Skills

- Diagnostics: Identifying and addressing common technical issues.
- Basic Repairs: Simple repair techniques and tools needed.

Program Outcomes: At the end of the program, the learner will be able to

- Identify and explain the functions of key drone components, including airframes, motors, propellers, flight controllers and batteries.
- Assemble a drone from scratch, following standard procedures and safety protocols.
- Performing routine maintenance and basic repairs on drones, including addressing common issues like motor malfunctions and propeller damage.
- Demonstrate the ability to operate a drone, including basic flight maneuvers and control adjustments, in a safe and controlled manner.
- Conduct pre-flight checks, follow safety protocols and adhere to regulatory requirements for drone operation.

TRAINING LOCATION

Advanced Drone Lab, Anviksha, GSFC University, Vadodara
Assessment and Certification: GSFC University and Garuda Aerospace Pvt. Ltd.

2. COURSE NAME: DRONE PILOT TRAINING PROGRAM

About Training Program: The drone pilot training program provided rigorous preparation for obtaining a commercial drone pilot training, including extensive instruction on flight operations, navigation, safety regulations and compliance with industry standards to ensure participants are fully equipped for professional drone piloting.

- **Course Duration:** 08 Days with 06 hours per day
- **DGCA License:** Small Category Drone
- **Course Fees:** Rs. 25,000/- (18% GST Additional)
- **Keynote Speakers:** from Garuda Aerospace Pvt. Ltd., Chennai
- **Who can Participate:** Aspiring drone pilots can explore diverse industries as Agriculture, Energy & Utilities, Survey and Mapping, Logistics and Delivery, Photo and Videography, Drone Service Providers, Environmental Monitoring, Education and Training
- **Entry Qualification:** 10th Pass with minimum age criteria of 18 year

COURSE CONTENT

1. Ground rules, ATC procedures, safety and security procedures, introduction to flight

- Introduction to regulations, laws governing drone operations, maintenance and flying - Understanding local aviation regulations and drone laws - Obtaining necessary licenses and certifications - Maintaining compliance with flight restrictions and airspace regulations
- ATC procedures
- Basic principles of flight and essentials of aerodynamics of drones - Principles of flight and aerodynamics relevant to drones - Understanding flight controls and manoeuvres
- Safety and security of operations - Safety precautions and risk management

2. Simulation and Flying

- Mission inspections, mission checks, mission plan and mission operations
- Conducting pre-flight inspections - Visually inspect the drone for structural damages, inspect the propeller and the motor
- Pre-flight checks - check battery levels, RPM, propellers, camera and electronic equipment
- Pre-flight operations - make sure the command & control link is established, calibrate the drone compass and IMU sensors, rpm sensor, three position switch, check for correct movement and functioning of drone using the remote-control transmitter, perform hand test or bench test for proper operation with the experienced instructor, perform flight manoeuvres (hover, level, yaw, pitch and roll)
- Flight simulator training
- Basic assembly and maintenance
- Dynamic payload ground handling
- Practical flying with Instructor/Solo Flying

3. Conducting post-flight operations, checks and inspections
- Pre-landing operations
- Post-landing inspections
- Post-flight checks

Program Outcomes: At the end of the program, the learner will be able to
- Operate/fly the drone during take-off, maneuvering, flying and landing of drones using a command & control link, transmitter and receiver pairs.
- Be familiarized with basic procedures, regulatory frameworks related to drone flying, ATC procedures.
- Operate a drone with essential safety procedures followed.
- Think logically; demonstrate good situational control, steady hand at operations, attention to detail, able to prioritize workload.
- Have work focus and ability to work under varied situations.

TRAINING LOCATION

Theory (Two days): GSFC University, Vadodara

Simulation and Practical (Six days)*: Garuda Aerospace Pvt. Ltd., Agni College of Technology, Old Mahabalipuram Road, Thalambur Road, Chennai, Tamil Nadu – 600130

*Garuda will provide accommodation and food facilities at reasonable rates in Chennai.

Assessment: Garuda Aerospace Pvt. Ltd., Chennai

Certification: Directorate General of Civil Aviation (DGCA), Govt. of India

Apply Now:
Registration Form: https://bit.ly/GSFCUDrone
Last Date of Registration: 15th Nov, 2024

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Registration Form:
https://bit.ly/GSFCUDrone

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