KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI

SKILL LABS

Schedule of Skill labs offered at KLSGIT

Sl No	Department	Start date	End date	Title of Skill lab
1	Aeronautical Engineering	04-11-2024	09-11-2024	UAS Design, Simulation & Flight Training Lab

Skill lab (Detailed schedule)

Sl No	Department	Title of Skill lab	Semester & Division	Venue	Dates	Faculty name	Phone No	Email id
1	Aeronautical Engineering	UAS Design, Simulation & Flight Training Lab	III	Advanced Flight simulator and Control lab	04-11-2024 o 09-11-2024	Prof. I V Patil	9037800468	ivpatil@git.edu

SKILL LAB

ON
UAS Design, Simulation & Flight Training Lab
For III Semester Students

KLS GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI
Department of Aeronautical Engineering

Overview:

UAV design, simulation, and flight training cover the fundamentals of creating unmanned aerial vehicles, including airframe design, propulsion systems, and control algorithms. Simulations test flight dynamics, stability, and performance, while flight training involves hands-on piloting, navigation, and safety skills. In the aeronautical field, these skills are essential for developing advanced aerial systems and optimizing aircraft performance. UAV technology fosters innovation in aerospace, defense, and agriculture, offering job opportunities in aircraft design, flight dynamics, avionics, and control systems, meeting the demand for professionals skilled in robotics, AI integration, and aerial data analysis.

Mode of Conduction of each Module:
Theory : 18 Hours,
Demo : 6 Hours,
Lab Sessions : 12 Hours,
Total duration : 36 Hours

Module 1: Introduction to UAVs
Overview of UAV types
Applications in various
Emerging trends and technology

Module 3: UAV Design and Structures
Key airframe components and materials
Propulsion systems
Payload integration and weight distribution

Module 2: UAV Aerodynamics and Flight Mechanics
Principles of flight (lift, drag, thrust)
Stability and control basics
Overview of flight dynamics specific to UAVs

Module 4: Avionics and Control Systems
Flight controllers, sensors
Introduction to autopilot and flight control
Testing and validation

Terms and Conditions

Students who have paid a skill lab fee to the institution are eligible for training.

The students must maintain 90% attendance for obtaining the skill lab certificate.

Students must attend training as per scheduled time.

Acceptance

In order to accept and start the training program, students are required to register with the respective department. Details to be provided by the student to the department include:

Name, USN, UID, Mobile No, Email id

Coordinators:

Name : I V Patil
Dept. of Aeronautical Engineering
Phone: 9037800468
E-mail: ivpatil@git.edu

Outcomes

Understand various applications and emerging trends in UAV technology.
Demonstrate an understanding of UAV stability, control, and flight dynamics.

Mention briefly about the job opportunities students have after completing the course..