



Central Training & Placement Cell, AKTU in  
association with ERA Foundation presents



# KALAM PRAGATI

Empowering Engineers with Skills for Success

At Centre for Advanced Studies, AKTU, Lucknow



Laser cutting machine

## About Kalam Pragati

Kalam Pragati is an initiative by Dr. Abdul Kalam Technical University to help engineering students choose the right career by building their competitiveness and exposing them to various opportunities available in the industry.

Kalam Pragati offers courses designed along with industry experts that will enhance the learner's 21st- century skills while also giving access to machines, tools and mentors to build products and the solutions that positively impact community.



CNC wood routing machine



3 D printing machine

## An Initiative towards Skilling Students

Central Training & Placement Cell, AKTU has initiated Kalam Pragati that empowers students to become problem solvers, acquire competency in emerging technologies and develop solutions that have a positive impact on the community. Kalam Pragati conducts structured programs at the Center for Advanced Studies to equip the students with practical experience and give them hands-on exposure to advanced technologies, tools and machinery.



## About ERA Foundation

We focus on exam solutions, career counselling, assessment & rating. We at ERA Foundation operate with a larger objective of enabling holistic improvement of the education sector through consultation and cooperation with key stakeholders including policy makers, education institutions, corporate sector and the student community.



Scan the QR code to fill the interest form.

# INNOVATION & DESIGN THINKING



## Course Outcome

- Use design thinking and rapid prototyping to solve problems.
- Create low-fidelity and digital prototypes with interactive flows.
- Safely work with tools and digital fabrication equipment.
- Build basic electronic systems with circuits and microcontrollers.
- Design and fabricate custom components with 3D CAD and CNC.
- Collaborate to design, test, and showcase functional prototypes.

## Course Overview (12 sessions)

1 - Introduction & Rapid Prototyping	5 - Fabrication Challenge	9 - 3D CAD Modelling for Prototyping
2 - Low-Fidelity Prototyping	6 - Electronics & Circuit Design	10 - 3D Printing & Additive Mfg
3 - Figma Digital Interface Prototyping	7 - Microcontrollers & Interfacing	11 - Advanced Fabrication
4 - Tools & Safety Fundamentals	8 - Arduino: Sensors & Motors	12 - Integrated Prototyping Challenge

# ROBOTICS & SYSTEM INTELLIGENCE

## Course Outcome

- Use design thinking and rapid prototyping to solve problems.
- Create low-fidelity and digital prototypes with interactive flows.
- Safely work with tools and digital fabrication equipment.
- Build basic electronic systems with circuits and microcontrollers.
- Design and fabricate custom components with 3D CAD and CNC.
- Collaborate to design, test, and showcase functional prototypes.



## Course Overview (12 sessions)

1 - Introduction to Robotics Systems	5 - Intelligent Robotics & Perception	9 - AI-Based Robotics Applications
2 - Electronics, Sensors & Actuators	6 - NVIDIA Jetson Nano Basics	10 - System Testing & Optimization
3 - Embedded Systems & MCUs	7 - Computer Vision Fundamentals	11 - Final Robotics Project Build
4 - Robotic Programming	8 - Sensor Fusion Basics	12 - Demonstration & Evaluation

# INTERNET OF THINGS (IOT)



## Course Outcome

- Understand end-to-end IoT architecture & system components
- Interface sensors and actuators for data acquisition and control
- Develop embedded firmware for connected devices
- Implement IoT communication protocols: device and cloud connectivity
- Design cloud dashboards for data handling and visualization
- Build and demonstrate a complete IoT solution for a real-world use case

## Course Overview (12 sessions)

1 - IoT fundamentals and applications	5 - Comm. Protocols & Connectivity	9 - Security & Reliability in IoT Systems
2 - Architecture & System Components	6 - Cloud Platforms & Data Handling	10 - System Integration & Testing
3 - Sensors, Actuators & Data Acquisition	7 - Dashboards & Data Visualization	11 - IoT Project Development
4 - IoT Devices Embedded Programming	8 - Automation & Smart Systems	12 - Final Project Demonstration

# OUR JOURNEY SO FAR.....

## PILOT PROJECT@1st March 2025

Era Foundation, with AKTU and the Government of Uttar Pradesh, launched the Kalam Pragati Skill Program to equip students with hands-on training in Robotics and Innovation & Design Thinking, preparing them to solve real-world challenges and excel in national competitions.



## DEMO DAY@21st June 2025

The program concluded with a high-energy Demo Day, where students showcased the skills they have gained, presented their final prototypes, and celebrated their journey—capturing the true spirit of hands-on learning, teamwork, and innovation.

## MAKE4LUCKNOW@19th June 2025

This Hackathon selected and brought together 100+ students across 35 teams from Uttar Pradesh, where they showcased innovative ideas, competed for attractive cash prizes culminating in jury evaluations, partner presentations, and winner announcements.



## Internship Program @1<sup>st</sup> Sept 2025

MakeX Internship Demo Day showcased selected 23 innovative prototypes. Over three hours of inspiring presentations and creative solutions highlighted the power of teamwork and hands-on learning, with esteemed guests joining us to celebrate the spirit of innovation.

### Contact Us:

#### Central Training & Placement Cell

Dr. A. P. J. Abdul Kalam Technical University,  
Sector 11, Jankipuram, Vistar Yojna , AKTU  
Campus, Lucknow, Uttar Pradesh 226031

### For More Information visit:

[KalamPragati.com](http://KalamPragati.com)

 +91 96867 37460, +91 87123 28848

 [reachus@kalampragati.com](mailto:reachus@kalampragati.com)  
[marketing@kalampragati.com](mailto:marketing@kalampragati.com)