



EMERGING TECHNOLOGIES SKILL ENHANCEMENT PROGRAMS FOR INSTITUTIONS

WBH
MODEL

WORKSHOPS

BOOTCAMPS

HACKATHONS

ELECTRICAL | ELECTRONICS | COMPUTER SCIENCE

A Structured Learning Approach
for Technology Awareness,
Skill Development, and Innovation



VINAY ANGALAKURTHI

Founder & CEO

Young Minds & Takeoff Edu Group

ABOUT TAKEOFF EDU GROUP

In today's rapidly evolving technological world, industries expect graduates to possess not only academic knowledge but also strong practical and problem-solving skills. However, a gap still exists between classroom learning and real industry requirements.

Through our technology company YoungMinds Technology Solutions Pvt. Ltd., we closely work with real industry environments and continuously observe emerging technologies and skill demands.

Recognizing this gap, Takeoff Edu Group was created to bridge academia and industry. Based on our industry insights and academic experience, we designed the WBH Learning Model (Workshop - Bootcamp - Hackathon) to help students strengthen conceptual understanding, develop practical skills, and explore innovation through real-world problem solving



WBH VALUE STATEMENT

The WBH Model (Workshop - Bootcamp - Hackathon) is designed to help students move beyond theoretical learning and develop strong conceptual understanding, practical skills, and innovation capabilities.

This structured approach enables students to bring technologies across Electrical, Electronics, and Software domains through guided learning, hands-on activities, and problem-solving experiences.

Through the WBH learning pathway, students gain the confidence to apply their knowledge to real-world challenges, strengthening both their technical abilities and their innovation mindset.

WORKSHOPS

TECHNOLOGY AWARENESS & CONCEPT DEVELOPMENT

DURATION: 1-2 DAYS

KEY ACTIVITIES

- ▶ Introduction to emerging technologies
- ▶ Concept explanation and demonstrations
- ▶ Hands-on technical exposure
- ▶ Interaction with technical experts

INSTITUTIONAL VALUE

- ▶ Enhances technical awareness among students
- ▶ Encourages practical learning beyond classroom teaching



BOOTCAMPS

INTENSIVE SKILL DEVELOPMENT PROGRAMS

DURATION: 1-4 WEEKS (10-20 WORKING DAYS)

KEY ACTIVITIES

- ▶ Advanced technical training sessions
- ▶ Practical exercises and guided implementation
- ▶ Project-based learning activities
- ▶ Technical mentoring and skill development support

INSTITUTIONAL VALUE

- ▶ Strengthens technical skill development among students
- ▶ Prepares students for industry-oriented engineering work

HACKATHONS

INNOVATION & ENGINEERING PROBLEM-SOLVING EVENTS

DURATION: 24-48 HOURS

KEY ACTIVITIES

- ▶ Team-based problem solving
- ▶ Idea generation and design thinking
- ▶ Rapid prototype development
- ▶ Project presentation and evaluation

INSTITUTIONAL VALUE

- ▶ Promotes innovation culture among students
- ▶ Encourages collaborative and interdisciplinary learning



STUDENT PARTICIPATION

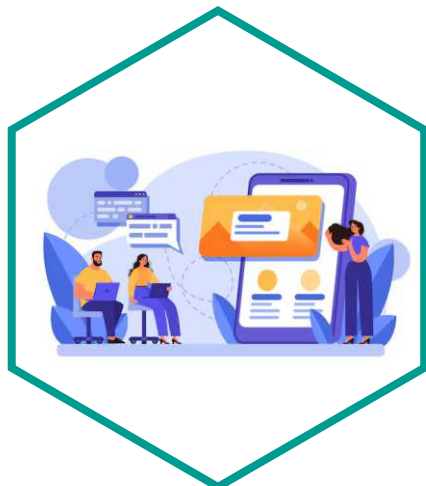
Open to First to Final Year students from:

- ▶ Electrical & Electronics Engineering (EEE)
- ▶ Electronics & Communication Engineering (ECE)
- ▶ Computer Science Engineering (CSE)

Helps students build knowledge, skills, and innovation mindset throughout their studies.



PROGRAM STRUCTURE OVERVIEW



PROGRAM DELIVERABLES

- ▶ Participation Certificates
- ▶ Learning Materials & Technical Resources
- ▶ Industry Internship & Career Development Pathway

EMERGING TECHNOLOGY AREAS COVERED IN WBH PROGRAMS

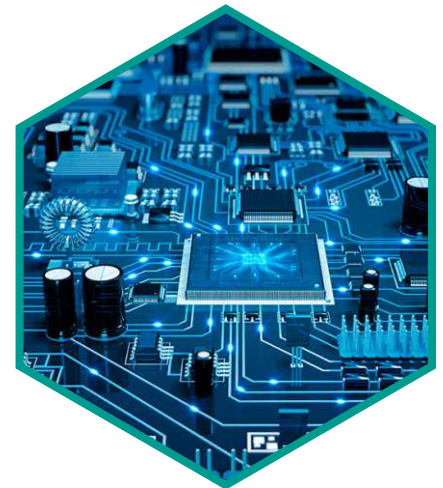
COMPUTER SCIENCE / SOFTWARE TECHNOLOGIES

- ▶ Artificial Intelligence (AI) Fundamentals
- ▶ Machine Learning Applications
- ▶ Generative AI & AI Tools
- ▶ Data Science & Data Analytics
- ▶ Full Stack Web Development
- ▶ Cloud Computing Fundamentals
- ▶ Cybersecurity Essentials
- ▶ Internet of Things (IoT) Software Platforms
- ▶ Mobile App Development
- ▶ Automation using Python



ELECTRONICS TECHNOLOGIES

- ▶ Internet of Things (IoT) System Development
- ▶ Embedded Systems & Smart Devices
- ▶ Edge AI for Embedded Applications
- ▶ Sensor-Based Systems
- ▶ Robotics & Intelligent Control Systems
- ▶ VLSI Design Fundamentals
- ▶ FPGA-Based Digital Systems
- ▶ Smart Communication Systems
- ▶ Electronics for Automation Applications

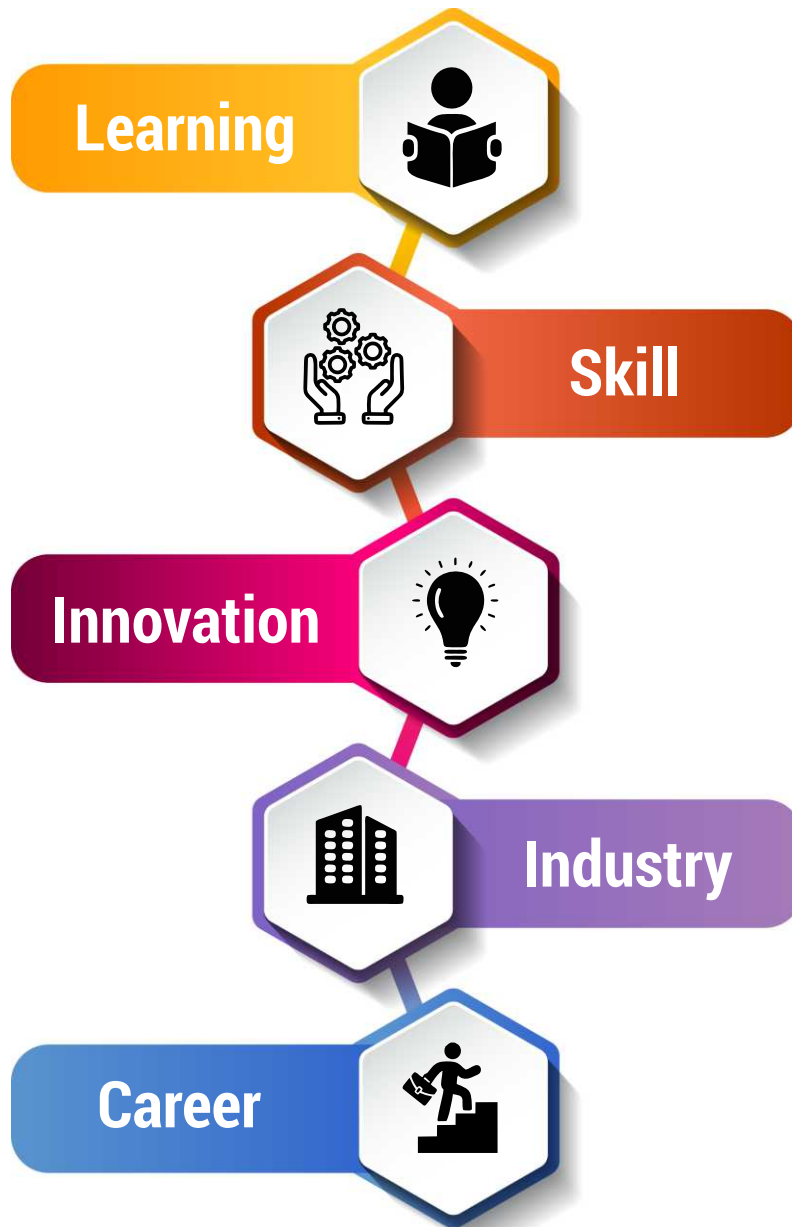


ELECTRICAL TECHNOLOGIES

- ▶ Electric Vehicle (EV) Technology & Charging Systems
- ▶ Renewable Energy Systems (Solar, Wind & Hybrid Systems)
- ▶ AI-Driven Smart Grid Monitoring & Control
- ▶ Power Electronics for Modern Energy Systems
- ▶ AI-Based Power Quality Monitoring
- ▶ MATLAB/Simulink Applications in Electrical Systems
- ▶ AI Applications in Power Systems
- ▶ Intelligent Energy Management Systems



WBH INDUSTRY- ORIENTED LEARNING PATHWAY



KEY PROGRAM OUTCOMES

- ▶ Strong technical & practical skills
- ▶ Exposure to new technologies
- ▶ Better problem-solving ability
- ▶ Hands-on project experience
- ▶ Innovation & teamwork skills



WHY CHOOSE TAKEOFF EDU GROUP

01

Expertise in EEE, ECE, and CSE under one platform

02

Structured WBH learning model

03

Focus on practical and hands-on technical training

04

Support for interdisciplinary engineering solutions

05

Participation certificates provided for all programs

06

Learning materials and technical resources provided

07

Programs suitable for First Year to Final Year students

takeoff[®]edu

G R O U P



Our Website



Our Location

Contact Us

+91 90303 33433 | 99660 62884

info@takeoffprojects.com

www.takeoffprojects.com

Balaji Colony

1st Floor, 1-5-558 2nd Street, Balaji Colony,
Tirupati, Andhra Pradesh - 517501.

Bhavani Nagar

6-2-85/B, Old Maternity Hospital Road,
Tirupati, Andhra Pradesh - 517501.

