

# KARE ACM SIGBED

# DIGICON 4.0



## RULE GUIDE

DIGICON 4.0 – Official Participant Rule Book

Organized by KARE ACM SIGBED Student Chapter | Euphoria 2K26

### EVENT OVERVIEW

DIGICON 4.0 is a 24-hour Embedded Systems & IoT Hackathon where teams build real-time solutions using sensors, actuators, microcontrollers, and IoT connectivity.

Venue: VLSI Lab, 8th block, 2<sup>nd</sup> floor, Room no-8201

Date: March 13 – 14, 2026

Time: 10:00 AM – 10:00 AM (24 Hours)

### HACKATHON STRUCTURE

Phase 1 – Ideation (2 Hours)

- Understand the problem statement
- Brainstorm ideas
- Plan system flow and roles

Phase 2 – System Design & Simulation (3 Hours)

- Design system architecture
- Create circuit diagrams
- Simulate program logic

Phase 3 – Hardware Implementation (3.5 Hours)

- Assemble hardware components
- Interface sensors with microcontroller
- Develop firmware and test the prototype

Phase 4 – IoT Integration (2.5 Hours)

- Connect system to cloud platform
- Send real-time data
- Create a web dashboard for monitoring

### MICROCONTROLLER USAGE

- Teams can choose ESP32 or ESP8266.
- Only one primary controller should be used unless justified

### DEVELOPMENT RULES

- All development must happen during the hackathon.
- Internet and programming libraries are allowed.
- Plagiarism or copying is strictly prohibited.

### EQUIPMENT RESPONSIBILITY

- Handle hardware components carefully.
- Report any damage immediately.
- Return reusable components after the event.

### CODE OF CONDUCT

Disqualification may occur for:

- Plagiarism
- Disturbing other teams
- Damaging equipment
- Misconduct

### TEAM FORMATION

- Each team must have 3 members.
- Team members cannot be changed during the event.
- A participant cannot join multiple teams.
- All members must be present during evaluation and final demo

### HARDWARE KIT

Each team will receive components such as:

- ESP32 / ESP8266
- Sensors (DHT22, MQ2, PIR, LDR, Ultrasonic)
- Displays (OLED, LCD, Seven Segment)
- Input modules (Push Button, Keypad)
- Output modules (Buzzer, Servo Motor, Relay)
- Other basic components

Teams should mainly use provided hardware components

### PARTICIPANT RESPONSIBILITIES

Participants must:

- Follow the event schedule
- Attend evaluations on time
- Maintain a clean workspace
- Cooperate with organizers
- Carry a valid college ID card

### SUBMISSION REQUIREMENTS

Teams may need to submit:

- Source code
- System architecture / block diagram
- Dashboard demonstration
- Short project explanation

### EVALUATION CRITERIA

Projects will be judged based on Innovation

- System design
- Implementation quality
- Hardware integration
- IoT connectivity
- Dashboard functionality
- Technical explanation

### ORGANIZER AUTHORITY

The organizing committee and judges hold final authority regarding rules and decisions

### PROBLEM STATEMENT RULES

Projects must include

- Sensors and actuators
- Decision-making logic
- IoT connectivity
- Remote monitoring dashboard
- Not allowed:
  - Camera-based systems
  - Biometric sensing
  - Image/audio processing
  - Machine vision systems

— DIGICON 4.0 ORGANIZING TEAM  
KARE ACM SIGBED STUDENT CHAPTER





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## PARTICIPANT SUPPORT CONTACTS

Participants may contact the following personnel for operational assistance only during the hackathon



Name: KANNIGA M

Phone: +91 6379225310

For:

Kit issues, Component replacement, Power supply issues, Hardware availability, Workspace concerns



Name: NIVASH S

Phone: +91 6382152668

For:

Round timing, Submission, Evaluation, Round instructions



Name: Mugilan S P

Phone: +91 6369516278

For:

Refreshments, Water, Break, Seating



Name: KAILASH RAVICHANDRAN

Phone: +91 9952256335

For:

Any general event-related concerns

### IMPLEMENTATION ASSISTANCE POLICY

Support personnel are permitted to assist only with:

- Kit replacement
- Hardware availability
- Platform accessibility
- Network connectivity
- Support personnel are not permitted to:
- Suggest components
- Provide circuit connections
- Assist in coding
- Recommend system logic
- Assist in IoT integration
- Assist in dashboard creation
- Provide circuit connections

ALL SYSTEM DESIGN AND IMPLEMENTATION MUST BE CARRIED OUT INDEPENDENTLY BY THE PARTICIPATING TEAMS