DATE : 25th and 26th November, 2021.

DAY - 1 SCHEDULE

Events	Timings
Inaugurations	9:00am to 10:30 am
Workshop-1 (Block Chain)	Session-1 ⟶ 9:30am to 12:30pm Session-2 ⟶ 1:00pm to 4:00pm
Workshop-2 (Robotics)	Session-1 ⟶ 9:30am to 12:30pm Session-2 ⟶ 1:00pm to 4:00pm
PPT	9:00am to 4:00pm
Technical Events	9:00am to 4:00pm
Non-Technical Events	9:00am to 4:00pm

DAY - 2 SCHEDULE

Events	Timings
Workshop-1 (Block Chain)	Session-1 ⟶ 9:30am to 12:30pm
Workshop-2 (Robotics)	Session-1 ⟶ 9:30am to 12:30pm
PPT	9:00am to 4:00pm
Non-Technical Events	9:00am to 4:00pm
Culturals	1:00pm to 4:00pm

WORKSHOPS

Voice recognition robot with arduino UNO:

It is aimed to control a robot with speech commands. The robot is able to recognise spoken commands to move correctly. The computer recognises the command by speech recognition system. And the computer converts the voice command to the direction command that is predefined and recognisable by the robot.

ROBOTICS Workshop

9:30 AM TO 9:45 AM – ROBOTICS OVERVIEW

- Introduction to Robotics
- State-of-the-art in Robotics
- Future scope of Robotics
- Workshop overview

9:45 AM TO 10:00 AM – COMPONENTS OF A ROBOT

- Sensors
- Microcontroller/Microprocessor
- Actuators
- Software/programming

10:00 AM TO 10:30 AM – MICROCONTROLLERS AND MICROPROCESSORS

- Microcontroller vs Microprocessor
- Role of microcontrollers in Robotics
- Introduction to Arduino UNO
- ATmega328P Microcontroller
- Single board computers

10:30 AM TO 11:30 AM – HANDS-ON WITH ARDUINO

- Arduino UNO Pinout description
- Using Arduino to control an LED

o Connecting the LED

o ON and OFF

o Brightness control

Gokaraju Rangaraju Institute of Engineering and Technology
Bachupally, Nizampet Road, Kukatpally, Hyderabad - 500 090
Ph: 040 - 65864440/4441 , Fax: 23040806

• Using Arduino to control a DC motor

o Purpose of a motor driver

o Interfacing an L293D motor driver with Arduino

o Direction and speed of DC motor

• Using Arduino to read values from a sensor

o Connecting an ultrasonic sensor

o Reading digital and analog values

o Controlling the LED/Motor using sensor values

11:30 AM TO 12:30 PM – OBSTACLE AVOIDING ROBOT

• Logic for building Obstacle Avoiding Robot

• Assembling the components – chassis

• Making the connections – electronics

• Running the robot – code

1:00 PM TO 1:30 PM – ARDUINO BLUETOOTH CONTROL

• Introduction to HC-05 Bluetooth module

• AT commands for configuration

• Controlling an LED using Bluetooth

1:30 PM TO 3:30 PM – VOICE RECOGNITION ROBOT

• Logic for building Voice Recognition Robot

• Making the connections – electronics

• Running the robot – code

3:30 PM TO 4:00 PM – SUMMARY, DOUBT CLARIFICATION, TROUBLESHOOTING

DAY 2

9:30 AM TO 10:00 AM – LOGIC AND CODE DISCUSSION FOR VARIOUS ROBOTS

- Obstacle following robot
- Edge detection robot
- Line following robot
- Maze solving robot

10:00 AM TO 11:30 AM – COMPETITION BASED ON CONCEPTS LEARNT IN WORKSHOP

#TheEndofWorkshop

BLOCKCHAIN Workshop

What Is a Blockchain?

A blockchain is a distributed database that is shared among the nodes of a computer network. As a database, a blockchain stores information electronically in digital format. Blockchains are best known for their crucial role in cryptocurrency systems, such as Bitcoin, for maintaining a secure and decentralised record of transactions. The innovation with a blockchain is that it guarantees the fidelity and security of a record of data and generates trust without the need for a trusted third party.

Blockchain Session Plan

Day 1

9:30am to 10:00am (Blockchain Overview)

- Blockchain opportunity
- Blockchain scopes
- Blockchain jobs
- Blockchain revenue and investment

10:00 AM to 11:00 AM (Blockchain Overview)

- Introduction to Blockchain
- Scope of Blockchain in different domains
- Harnessing Blockchain
- Blockchain Vs traditional approach
- Practical Applications of Blockchain/ Case Studies

Gokaraju Rangaraju Institute of Engineering and Technology
Bachupally, Nizampet Road, Kukatpally, Hyderabad - 500 090
Ph: 040 - 65864440/4441 , Fax: 23040806

11:00 AM to 12:30 PM (Blockchain Demystified)

- Architecture of Blockchain
- Decentralised - Distributed - Centralized authority
- Hashing
- Cryptography
- Proof of work
- Nodes and Mining

1:00 PM to 2:00 PM (Introduction to Ethereum)

- Different platforms for building Blockchain applications
- Private vs Public Blockchain
- Different Blockchain platform
- Ethereum architecture

2:00 PM to 4:00 PM (Deep Dive into Ethereum)

- Wallets
- Metamask Wallet
- Different test networks
- Transaction flow
- Remix compiler
- Solidity language
- Hello world program

Day – 2

9:30 AM to 12:30 AM (Building Blockchain Applications)

- Case Study 1: Banking Application
- Case Study 2: Students certification from the university using blockchain
- Case Study 3: Linking Employer smart contract with Students certification contract from the university

Extra Time (Building Applications With Web Interface)

- Web-3: Case Study 3 with HTML frontend.
- Blockchain Online Quiz

#TheEndOfWorkshop

Paper & Poster Presentation:

The Paper Presentation competition was open to students of all branches of GRIET as well as other participating colleges. Students were asked to choose any technical topic of their choice and deliver a short presentation regarding the same topic.

- 5 –Minutes for Presentation,
- 1-Minute for Conclusion and
- 1-Minute to answer any queries posed by judges/peers

The participants were allowed to present individually or in teams of two. The participants were judged on their selection of topic, vivacity of explanation, and their ability to accurately answer the proposed questions. Students had to prepare poster on any of the one subject from the topics mentioned in the regulations. Time allocated for presentation was 10 min. The poster presentation was judged mainly based on the innovative concept, communication skills, interaction with others and how effectively posters were made. This year's Paper & Poster Presentation saw tremendous participation from all around the country.

Technical events

CSE department:

Code golf:

The code must be executed.

Error fixing:

Eliminate errors in the given code to get successful outputs as the complexity increases.

IT department:.

Web designing:

Web design is the process of planning, conceptualising, and arranging content online. Today, designing a website goes beyond aesthetics to include the website's overall functionality.Web design also includes web apps, mobile apps, and user interface design

Code-O-Fiesta :

It is a coding competition where the participants have to write a code and points will be given based on the difficulty level of the question.The one with the highest points will be declared as winner.

AIML department:

Scavenger Hunt:

Here students need to decrypt the modules to see the output. Based on the output label, they have to play a normal treasure hunt.

Dream App:

Students create their own app and we need to vote the app based on its importance services and performance.

ECE department:

Techtonic:

Round 1: The preliminary round consists of elementary technical questions ranging from simple sums to identification of symbols, etc. The contestants who answer the maximum number of questions correctly will advance to the next round.

Round 2: In this round, the contestants will be shown basic electronic lab equipment and must answer questions based on the same. The contestants who answer the most questions win.

Duel the Dark:

Round 1: Basic elements and circuits are shown and the participants are required to identify them. A minimum number of correct answers must be present to proceed to the next round.

Round 2: One contestant will be shown the circuit for 5 minutes and then blindfolded.That contestant will then give instructions to the other contestant for drawing the circuit.(The second contestant would not have seen the circuit). The team that draws the circuit accurately goes to the next round.

Round 3: Each contestant will be required to select a card from a bag. Each card contains a challenge that both the team members must work together to solve.The team which solves both the questions in the least amount of time is declared the winner.

EEE department:

Electryonz:

Round 1: The contestants will be tested on their knowledge of symbols. The contestants who answer the most questions will proceed to the next round.

Round 2: The contestants will be given circuits with mistakes/errors. The participants who identify the most errors by solving the most circuits in the set time limit will be declared the winner.

Blast the ballon:

We will be providing the balloon which contains a few questions. The participant is supposed to blast the balloon and pick the slip which is placed in it and answer the questions.

MECHANICAL department:

Mechognize:

The team has to see a picture shown on the projector and have to guess the machine parts or components by connecting the pictures as a clue each team consists of a maximum of 2 members.

Design Cad:

In this event students will be provided with a model or an object which should be drawn in Auto-cad.

CIVIL department:

Civil-ization:

The questions are given to the students which are in MCQs or True/False format. The student who manages to grab the maximum number of marks is the winner. These questions are prepared from the civil domain.

Nirmaan:

The team is supposed to construct a working model and is to be submitted one day before their presentation. They need to prepare a poster to prove their proposed model.Evaluation of the models is done accordingly.

Non-technical events

Box cricket:

It's a cricket game with two teams consisting of 5 members each and the area for the game is small when compared to the actual game.

Blind volleyball:

The court and the ball for volleyball for the blind are the same as those used for normal volleyball but the net is lower; 30cm from the floor. The ball is rolled on the floor. The team consists of six players. The three forward players are totally blind and wear eye masks. They recognise the ball by its rolling sound.

Bgmi tournament:

It is an online multiplayer battle royale game developed by bgmi.

Don't break the balloon:

The participant will be given a balloon and a picture, the participant has to draw that picture on the balloon after blowing the balloon without bursting it. The participant who will do that in less time or who will not burst the balloon in less time will be declared as the winner for that game.

Cup tower challenge with paper:

Glasses will be on top of each other, In between them tissue will be placed , the participants should pull the tissue without the glass falling on the bench.

Fitness challenge:

A challenge of exercise or any fitness related challenge will be given to the contestant if the task will be completed in time or completed perfectly will be declared as the winner of the challenge.

Trivia quiz:

It is a quiz game in which you have different categories like cricket, movies, web series, current affairs, cartoons, anime and logos .

Drink and flip cup:

Flip cup is a team-based drinking game where players must, in turn, drain a plastic cup of beer and then "flip" the cup so that it lands face-down on the table. If the cup falls off the table, any player can return said cup to the playing field.

Dart board:

A circular board, often of cork, marked with numbered wedges of alternating colours and a bull’s-eye in the centre, used as the target in a game of darts.

Tic tac toe with glasses :

A 3x3 box is formed. Glasses will be provided for the participants in which they need to flip the glass in the boxes. The one who completes a row or column or a diagonal first wins the game.

Treasure hunt:

A game in which players search for hidden objects by following a trail of clues.

Online challenges:

Photography challenge, meme challenge, reels challenge.