"ElectroTech " Technical activity club, Dept of ECE, MRU"

ElectroTech is aimed at organizing intra institutional and inter-institutional technical activities for students. The activities focus on inculcating Various Graduate Attributes among the students. It strives to inculcate global competitiveness, critical thinking, and social responsibility, develop aptitude and general awareness. It also organizes industry oriented and research oriented events. Students from ECE contribute as volunteers in organizing these events. The events are open for the students from all the branches of science, engineering and management. Deans, MRU have always been supporting the events as chief guests.

Objectives

❖ Enhance technical knowledge of students.

❖ Bring Awareness about live projects in industry.

❖ Train students in latest technology trends.

❖ Encourage students for innovation through technical competitions, quizzes etc.

❖ Bring awareness about Electronic Waste Management through upcylcing projects.

Distinguished Speakers

Engineers from CRIS (Ministry of Railways) Sr. Engineer Mr. Pawan Kumar

❖ Senior Experts from Telecom Industries like Huawei, Airtel etc with round the globe experience (Col. Deepankar Sen)

❖ Senior Scientists from labs of international repute (Prof. Pravat Mandal, Scientist- VI, NBRC, Dr. Deepika NBRC)

❖ Sr. Design Engineer with rich experience from ST Microelectronics , Mentor Graphics, Cadence etc. (Eng. Sandeep Gupta)

❖ Saurabh Sharma, Ex-Google, ExOLX- COO to (Sponsored Digital Marketing Internship worth Rs. 65000/- each for 15 students at MR)

Major Highlights

Expert Talk on
" Imaging Technology for Biomedical Applications"

Prof. Pravat K.Mandal, Scientist –VI, National Brain
Research Centre, Manesar, Haryana

Expert Talk on " Digital Diagnosis using
Neuroimaging Technology"

Dr. Deepika Shukla, Research Scholar, National
Brain Research Centre, Manesar, Haryana

Workshop on
" Interfacing with AV RISC 32 microcontroller

Design Eng. Pawan Kumar, Centre for Railway
Information Systems (Ministry of Railways)

Workshop on "Model Sim" Eng. Sandeep Gupta, Ex Design
Engineer at Mentor Graphics, Cadence, ST Microelectronics

Events **2017-18**

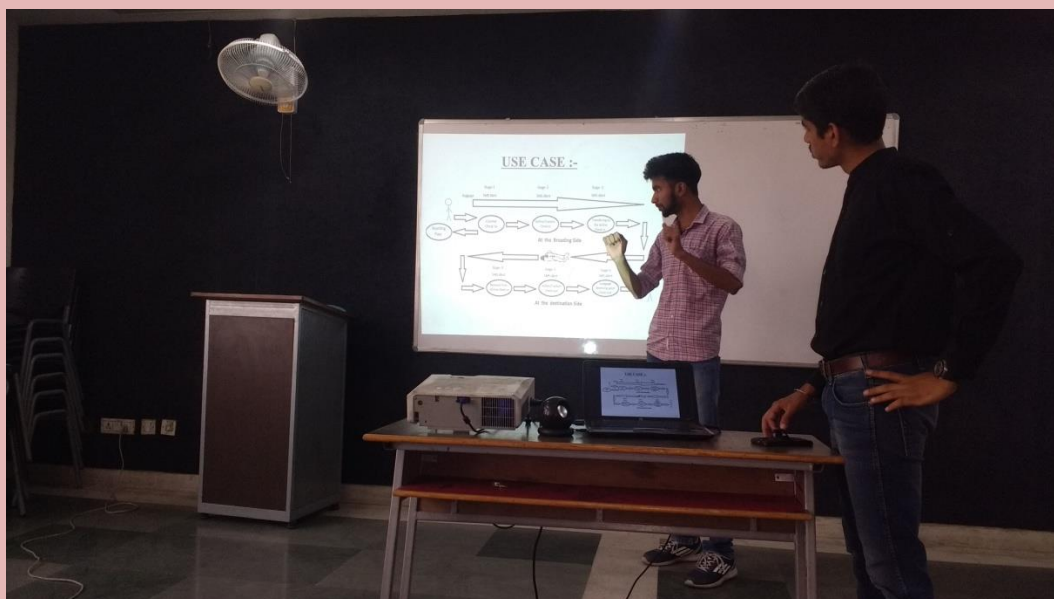|	Activity Name	Attribute	Date
1	Quiz competition on "electronic components and basic electronic circuits	Critical thinking	23/02/2017
2	EUREKA Innovative ideas	Innovation	11/4/2017
3	Innovate with Arduino	Critical thinking and Innovation	13/04/2017
4	Workshop on MODELSIM	Industry oriented	12/9/2017
5	Seminar on Wireless Communication	New Technologies	14/09/2017
6	Workshop on "Interfacing with Advanced RISC machines"	New Technologies and critical thinking	18/09/2017
7	Electronic waste upcycling projects	Environment and Social Responsibility	3/1/2018
8	Expert talk on "Imaging Technology for Biomedical Applications"	Research	23/02/2018
9	Expert talk on " Digital Diagnosis Using Imaging Technology"	Research	23/02/2018
10	Interaction with Saurabh Sharma Ex-google, Ex-olx COO	Global competitiveness	4/4/2018
11	International collaborations and prospects at MRU	Global competitiveness	11/4/2018
12	Free three and a half months Digital marketing internship" for MR students (selection and enrolment)	Global competitiveness	3/5/2018
13	"Qriosity " – Quiz competition for all branches	Aptitude and General Awareness	09/08/2018
14	Workshop on "Embedded systems solutions in IOT"	Global competitiveness	15/11/2018

"EUREKA", 2017

The technical activity team "ElectroTech Club" of Department of ECE, MRU organized a contest "EUREKA". The contest was open for the students of all the branches. Students showed their enthusiasm by participating in large numbers.

The contest was aimed to bring up the innovation skill in the students. A number of innovative ideas were presented. The audience participated with lot of interest in the discussions on the innovation content, feasibility in implementation, cost effectiveness, usefulness to the society, and environment friendliness of the projects proposed.

The ideas of ReSock, Q-mate and RFid based Airport Luggage Transport system were the three of the best ideas presented.

The ReSock was selected as the best idea by the judgment team. The Head of the Department graced the event by his presence.

ECE Technical Activity Week
(14th September, 2017 to 18th September, 2017)

The Department of ECE celebrated Technical Activity Week from **14th September to 18th September, 2017 as a tribute to Dr.O.P.Bhalla.** The main highlights were.

- ❖ **Free workshops , seminars, trainings**

- ❖ **Open for all Branches and semesters**

- ❖ **Focus on**: ASIC design, Telecommunication 4G/5G Technologies, Advanced RISC microcontrollers and their interfacing etc.

 Motivation

The motive of these activities was to encourage students to work in core areas of electronics and Communication Engineering like ASIC design, Telecommunication 4G/5G Technologies, Advanced RISC microcontrollers and their interfacing etc. Specialized Speakers and Trainers were invited from industry

in core electronics areas who shared their experiences and brought awareness about adopting electronics and communication as a career.

Workshop on ASIC Design and Model Sim

A workshop on ASIC design was organized on 14th September for students of ECE at B block auditorium. Eng. Sandeep Gupta who has worked for about more than 30 years with ST microelectronics, Cadence, Mentor Graphics and various other VLSI design Multinational industries of repute shared his experiences and motivated students to adopt VLSI design as their career.

He shared various roles of an engineer in a VLSI design industry. He also brought into light a number of concepts from real life projects in the industry and their implementation ideas. Eng. Aditya demonstrated the software ModelSim for ASIC simulation. The students participated in good number and got good motivation to take up core electronics as their career.

Seminar on "Industrial Aspects of Wireless Communication"

Col. Deepankar Sen having a huge experience in Telecom industry addresses students of ECE, MRU sharing the latest and upcoming technology in Wireless Communication. The expert talk was organized at B Block auditorium on **15th September, 2017**. He shared is experiences in industry. He has worked with many Telecom MNCs like Airtel, Huawei etc. Due to his vast experience in industry he could share many practical real life project problems and ideas, approach for their solutions. He shared very important concepts and ideas of Steve Jobs on building a good career and becoming a great Entrepreneur. Apart from all this he shared technical aspects regarding LTE and 5 G technology. Various applications of 5G were highlighted. He mentioned Artificial Intelligence to be the future of technology. He mentioned how the combination of 5G and AI would bring advances in near future.

Workshop on "Interfacing with AV RISC 32 microcontroller"

This workshop aimed at interfacing of Alf and Vegard's RISC processor with sensors, displays, GSM, RFID etc. The workshop was organized on **18th September, 2017** at H block seminar Hall. Eng. Pawan Kumar, Network specialist at CRIS, Northern Railways delivered his workshop with demonstrations of interfacing a number of devices with AVR32. He brought the practical concepts into light. He shared knowledge about real life projects in embedded systems. He also suggested students a number of project ideas that

can be built using these controllers. His sound knowledge was highly appreciated by the students and they got motivation to build up innovative projects in the relevant area.

"Tech Idol "2017

Quiz competition on Fundamentals of Electronics and Programming in C"

The Department of ECE organized a Quiz competition on fundamentals of electronics and C Programming on Friday 10th November, 2017. The competition was open for the students of all the branches.

The objective of the competition was to motivate students to give more emphasis on gaining fundamental knowledge. It would help the students to exercise their brains in computing faster and developing memory power too. A total of twelve teams participated with great enthusiasm. Two of the teams were announced as winners. The Associate Head of ECE, Ms. Yogita Gupta encouraged the students by awarding them with prizes and certificates. The Head of the Department Dr.Y.K.Awasthi encouraged the students to participate in such activities.

"Tech Idol – Qriosity" 2018

The Department of ECE organized a Quiz competition on **Quiz competition on Aptitude and General Awareness** on Thursday 9th August, 2018. The competition was open for the students of all the branches.

The objective of the competition was to motivate students to give more emphasis on improving their general awareness and aptitude. It would help the students to exercise their brains in computing faster and developing memory power too.

A total of eleven teams from all branches of science and engineering participated with great enthusiasm. Two of the teams were announced as winners. The Head of the Department Dr.Y.K.Awasthi and the ElectroTech coordinator Dr.Charu Pathak encouraged the students to participate in such activities.

WORKSHOP ON "EMBEDDED SYSTEMS SOLUTIONS IN IOT"

ELECTROTECH, the technical activity club of the Department of Electronics and Communication Engineering, MRU organized a one day workshop to bring awareness about the use of embedded systems in upcoming IOT applications. It was organized on 15th November, 2018. Eng. Pawan Kumar , from Centre of Railway Information Systems (CRIS), Indian Railways conducted the workshop. Students from Electronics and computer engineering (ECM), MRU, ECE, CS from MR and MRIU, ECE students from Sri Ram College of engineering, Palwal participated with great enthusiasm and interest.

The workshop was conducted by Engr. Pawan Kumar who is working with Centre for Railway Information Systems (CRIS), New Delhi. He has a vast experience in working with modern and latest embedded devices. He has worked on these applications in a live project implementing on "Gatimaan Express", an automated high speed train launched recently in India. Prof. Shruti Vashist, Dean Students graced the occasion by welcoming Engr. Pawan Kumar. She encouraged students to be a part of workshops which bring awareness about the upcoming technologies. Engr Pawan Kumar conducted hands on sessions for the students and encouraged them to be a part of industrial visit at Gatimaan Express to get acquainted with the live implementation of what is being taught during the workshop.

Outcomes

- Students internships CRIS, Mentor Graphics, 3ST Technologies, True chip , Digital Converse etc.

- Students participation at International and National level technical competitions / workshops like

- Microsoft Imagine Cup
- Elements Culmika (YMCA)
- Robotics Competition (YMCA),
- Go Green in the city (Schneider Electric) etc.