



PMC TECH



Er. PERUMAL MANIMEKALAI

COLLEGE OF ENGINEERING

(Apporved by AICTE New Delhi & Affiliated to Anna University, Chennai)
(Accredited by NAAC with 'B++' Grade & An ISO 9001-2015 Certified Institution)
NH-7,17th KM, Hosur-Krishnagiri Highways,Koneripalli,Hosur-635 117.
website:www.pmctech.org

DEPARTMENT OF MECHATRONICS ENGINEERING

ANNUAL NEWS LETTER

Volume-I

Issue-I

May-2021

Chief Patron:

Er.Perumal-Chairman

CHIEF PATRON

Er.Perumal-Chairman, -Chairman

PATRONS

Shri. P. Kumar- Secretary & Correspondent

Smt. P. Mallar- Trustee

Smt. S. Sasirekha- Trustee

CO-PATRON

Dr.S.Chitra, Principal

HOD

Prof. M.Sahithullah.,M.E.,Ph.D.,

EDITOR

Mr.N.Manivel,M.E.,
AP/MCO

PMC TECH-AN OVER VIEW

ABOUT THE DEPARTMENT

TECHNICAL SYMPOSIUM "INSAMAZE-2K20"

TECHNICAL SEMINAR

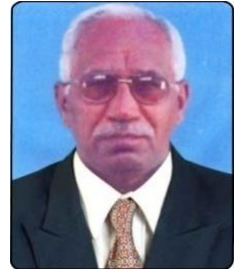
INDUSTRIAL VISIT

TECHNICAL WEBINAR

LAB FACILITIES

From the Chairman's Desk

“Make of us the hero warriors we inspire to become. May we fight successfully the great battle of the future that has to be won against the past that seeks to endure, so that the new things may manifest and we are ready to receive them”



***Er. P. Perumal,
Chairman.
PMC TECH - Group of Institutions***

Welcome to PMC TECH, where academics and activities never end and the students are molded as future technocrats and business leaders. The Institute works on the vision to become one of the leading centers of teaching, research and extensions in the field of Engineering and Technology through total commitment towards quality education and training. We instill our students with the strength of character, self-confidence technical competence and leadership in management.

We propagate knowledge to the students with the help of dedicated faculty, state-of-the-art library and well-equipped labs along with audio-visual theatre. The institute has an enviable track record of academic excellence, which is coupled with hands-on industrial training, and innumerable industry-institute interaction, which makes each PMC TECH student ready to be absorbed in the company.

From the Secretary's Desk

“The Institute not only extends good campus and state of the art computing facilities to the Students but also aims at giving those competencies that will make them leaders and trendsetters in their respective field, in this age of competition”



**Shri. P. Kumar,
Secretary & Correspondent,**

PMC TECH is committed to develop young minds for creative leadership in business and a proactive and useful role in social transformation. Today the need for being proactive and constructive is more acute than ever before due to the sweeping change influencing every aspect of our life. Therefore, there is need for action based on holistic training of youth to take on varied challenges of life.

An opportunity to study at PMC TECH empowers a student to acquire knowledge and develop skills that will enable him to lead a highly productive, rewarding and holistic life. As a part of PMC TECH's commitment towards quality technical education and excellence, we embarked on promoting Faculty Development Program, Seminars, Workshops and Conferences, which will keep the faculty and students abreast of their field.

From the Trustee's Desk

“The goal of education is the advancement of knowledge and the dissemination of truth”



**Smt. P. Mallar,
Trustee.**

The rapid rate of technological advancement and the information revolution have opened new series of challenges as well as opportunities. We aim to prepare the students to be successful in their workplace. It aims to prepare the students with technical knowledge and capabilities, flexibility and an understanding of the societal context of corporate world.

We give the students support and encouragement they need to reach their full potential. We strive to give professional education a new perspective and achieve perfection in all spheres. We provide a pleasant & intellectually stimulating environment. The main reason for our tremendous performance is the faculty, which makes PMC TECH stand out from the rest of engineering colleges and Institutes. I wish to assure all concerned that no efforts will be spared to bring PMC TECH as one of the top Technical education Institutions.

From the Trustee's Desk

“Education is the ability to listen to almost anything without losing your temper or self-confidence”



**Smt. S. Sasirekha,
Trustee.**

PMC TECH is committed to creating an ambience for nurturing innovation, creativity and excellence in our students. We aim to prepare the young engineers and managers to confidently and competently face the challenges of intensifying competition by imparting high quality technical and managerial education coupled with appropriate training and wide exposure to the state-of-art practices. Our educational programmes lay emphasis on all round personality development and also in inculcating human values and professional ethics which help our students become more humane and socially alive to lead a meaningful life.

This newsletter will help the students and faculty members to make them aware of different activities of their department as well as the other departments and will develop a better culture and academic environment. Further this will boost the morale of students and faculty to participate in future activities.

From the Principal's Desk



Dr.S.Chitra.,M.E.,Ph.D.,

Principal

“I believe that education is not just about teaching curriculum, it is also about the development of human intellect, capability to think independently and speak articulately. Through numerous student activities the college imparts all these life skills in students. Education in PMC TECH also emphasizes on development of personality, inter- personal skills and instilling the right values”

With a devoted and highly qualified set of faculty members, well provided infrastructure and efficient administrative staff, we always impart best education by giving in depth knowledge in the subject. We know that mere education does not make you a complete man / woman.. With our rich library, we want you to develop reading habits. We always endeavor that when student go out. They should be recognized as highly knowledgeable, amiable, active and greatly trust worthy individual. Thanks to the educationally committed management, we have the reputation that we provide all the facilities and amenities. May be because of all these,. I am thankful to all my colleagues who are striving hard to establish PMC TECH as one of the leading Engineering Institutions.



Prof.M.Sahithullah.,

HOD/MCO

“Our nuclear scientists and engineers have done a splendid job, and naturally, the entire nation has risen to salute their professional excellence, discipline, and patriotism. They have had the benefit of having been led in the past by great men like Homi Bhabha and Vikram Sarabhai. “

I feel ecstatic to introduce you to Department of Mechatronics Engineering, which is the foundation of engineers and Department of Mechatronics Engineering combines Mechanical Engineering and Electronics Engineering and strives for increasing the knowledge, enhancing the critical thinking, ability to change information into knowledge and power of analyzing the things technically of each and every individual of ever changing society through students. We always intend to impart knowledge through a closed knit family of highly competent faculty. Our Laboratories have been very well established not only to cover complete syllabus but to motivate students to learn beyond the syllabus which definitely develops complete knowledge of the subject (both the practical and theoretical depth of knowledge) and develop skill sets of students to become promising engineers in future. I would like to conclude with the words of Thomas Friedman who has rightly opined "World is flat opportunities are immense. It's just a question of identifying opportunities and making the best of them". I wish a very best of luck to the students.

PMC TECH-AN OVERVIEW

PMC TECH group of Institutions consisting of Engineering College Polytechnic and ITI were established in the year 1996 by Er.Perumal B.E, M.I.E, FIV, Our founder and Chairman and sponsored by **Er.Perumal Manimekalai Telugu Minority Educational and Charitable Trust. It is situated closer to the Industrial Hub, Hosur, Tamilnadu.**

Er.Perumal Manimekalai College of Engineering, established in the academic year 2002-2003 is Approved by All India Council for Technical Education (AICTE) and affiliated to Anna University. PMC TECH creates unique opportunities, provides individualized educational challenges, promotes high order thinking skills and maintains a strong tradition of academic excellence for students. The college is equipped with world class infrastructure and highly qualified, experienced faculty members. An active Placement Training and Welfare Cell is functioning with full enthusiasm with the aim of placing the students in top-notch companies. PMC TECH,a premier institution for higher education seeks to impart value added technical education and always aiming at excellence along with inculcation of ethical, moral, & professional values, with national welfare in heart.

ABOUT THE DEPARTMENT

Department of Mechatronics Engineering is a professional discipline that combines Electrical and Mechanical Engineering with Computer Technology and Control Engineering. Being a part of the PMC TECH family from the year 2013, it uses and provides new technologies in automation and robotics. The Department has highly qualified and experienced faculty members to strengthen and fulfill the needs of the students from rural community. It has highly equipped with modernized laboratories for the benefit and betterment of the students society in the field of Mechatronics Engineering. Tasks in hazardous environments or precise positioning to be accomplished suitably for the benefits of health, safety, society and economy.

VISION

To create a centre of excellence by imparting relevant technical knowledge and wisdom to the students' through innovative teaching and extensive practical exposure in the field of mechatronics coupled with relentless rendezvous in research to excel in their chosen career.

MISSION

- ❖ To ensure unique and effective, teaching-learning process through imparting in depth knowledge of the concepts, principles, and its applications.
- ❖ To enrich the students with extensive industry oriented practical knowledge through state of art laboratories meeting the needs of industry and society
- ❖ To provide distinctive opportunities for finding innovative solutions to the complex problems for the growth and development in industry and society.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

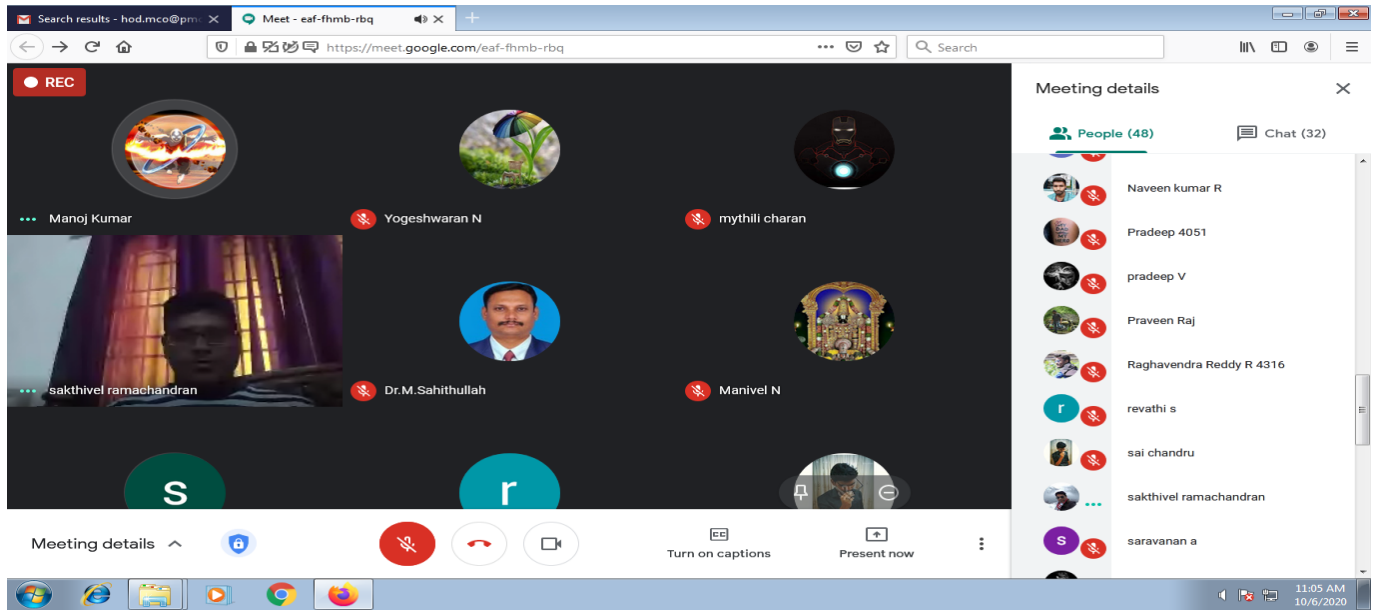
The graduates will be able to,

1. Inculcate Knowledge in Basic Engineering Sciences and Fundamentals of Mechanical, Electronics and Electrical Engineering.
2. To Design, Develop Product and applications in the field of Automation and Mechatronics.
3. Prepare Graduates to be valuable Engineers with excellent logical and Problem solving skills in a multidisciplinary environment.

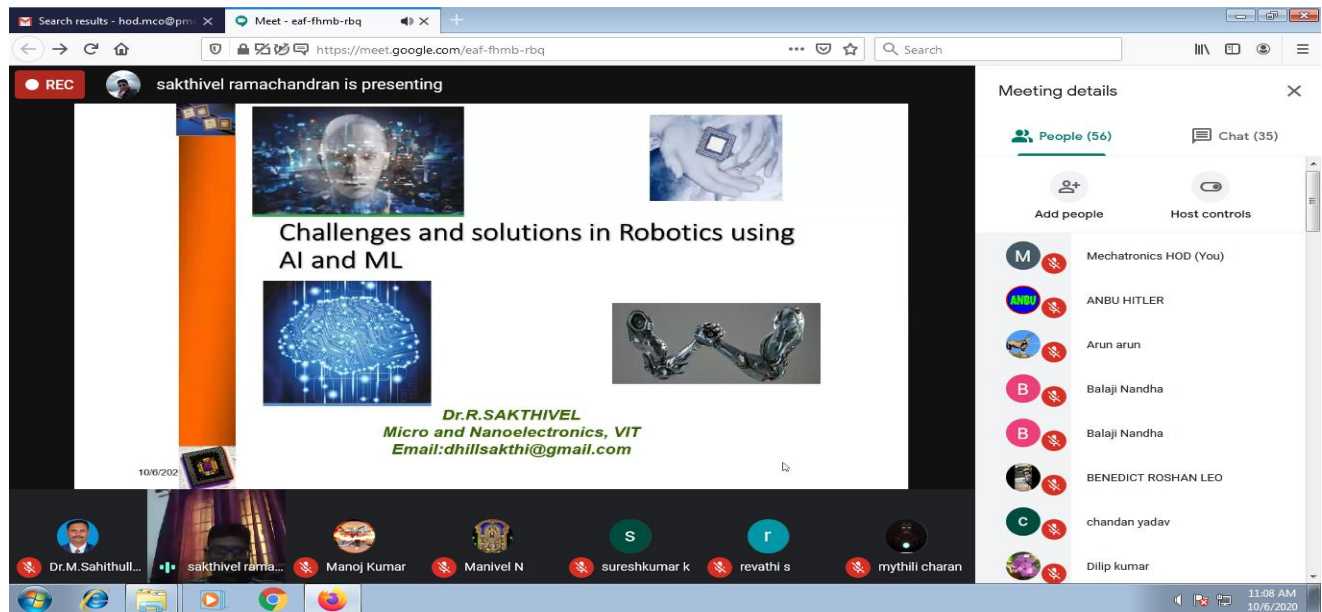
PROGRAM SPECIFIC OUTCOMES (PSOs)

1. Design and investigate the problems related to instrumentation, control, automation, and robotics provide solutions.
2. To develop a Mechatronics system to meet the requirements and specifications.
3. To analyse and improve the performance of a Mechatronics system and enhance the intellectual capabilities of the system.

TECHNICAL SYMPOSIUM "INSAMAZE-2K20"



Technical Symposium INSAMAZE-2K20 HoD Sir gave Welcome Address



Technical Symposium INSAMAZE-2K20 The Chief Guest gave Keynote Address

The Department of Mechatronics Engineering organized a one day National Level Technical Symposium on “INSAMAZE-2K20” on 10-10-2020. **Shri. P. Kumar**, Secretary & Correspondent delivered the Felicitation Address. **Smt.P.Mallar**, Trustee delivered the Special Address. **Prof.M.Sahithullah**, Head of the Department delivered the Welcome Address. **Dr.R.Sakthivel**, Professor, Department of ECE, VIT, Vellore as Chief Guest and delivered the Keynote Address. In this Symposium about 55 participants were participated and presented their papers. Finally **Mr.N.Manivel**, AP of Mechatronics Engineering proposed the Vote of Thanks.

TECHNICAL SEMINAR

S.NO	TITLE OF EVENT	CHIEF GUEST/SPEAKER	DATE	NO OF PATICIPANTS	YEAR/SEM
1	Recent Trends in Industrial ROBOTS & IIOT	Mr.R.Prasanna, Assistant Manager, FANUC India Limited, Bangalore	17.03.2021	51	MCO-II,III ,IV
2	Industrial Automation	Mr.G.S.Nagaraj, Senior Engineer, Technical Sales, Beckhoff Automation PvtLtd, Bangalore.	20.03.2021	51	MCO-II,III ,IV

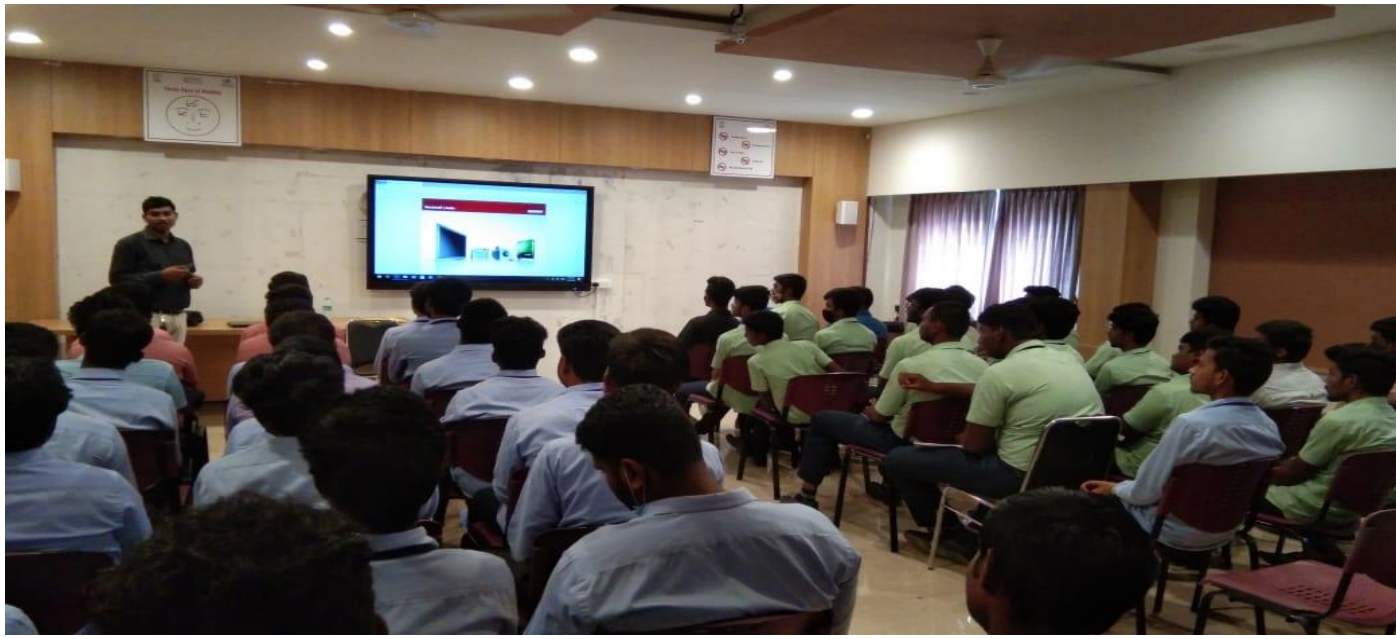
INDUSTRIAL ROBOTS & IIOT



Technical Seminar on Recent Trends in Industrial ROBOTS & IIOT

A Technical Seminar on “**Recent Trends in Industrial ROBOTS & IIOT**” was conducted by Department of Mechatronics Engineering on 17-03-2021 to the Second, Third & final Year students. **Mr.R.Prasanna**, Assistant Manager, FANUC India Limited, Bangalore was the Chief Guest and gave the lecture in the Seminar.

INDUSTRIAL AUTOMATION



Technical Seminar on Industrial Automation

A Technical Seminar on “**Industrial Automation**” was conducted by Department of Mechatronics Engineering on 20-03-2021 to the Second, Third & final Year students. **Mr.G.S.Nagaraj**, Senior Engineer, Technical Sales, Beckhoff Automation Pvt Ltd, Bangalore was the Chief Guest and gave the lecture in the Seminar.

INDUSTRIAL VISIT

S.NO	DEPARTMENT & YEAR	ORGANISATION VISITED WITH ADDRESS	DATE	NO.OF STUDENTS
1	MCO- IV	TVS UPASANA ENGINEERING LIMITED, Hosur	01.03.2021	25

TVS UPASANA ENGINEERING LIMITED



One day Industrial Visit at Tvs Upasana Engineering Limited, Hosur

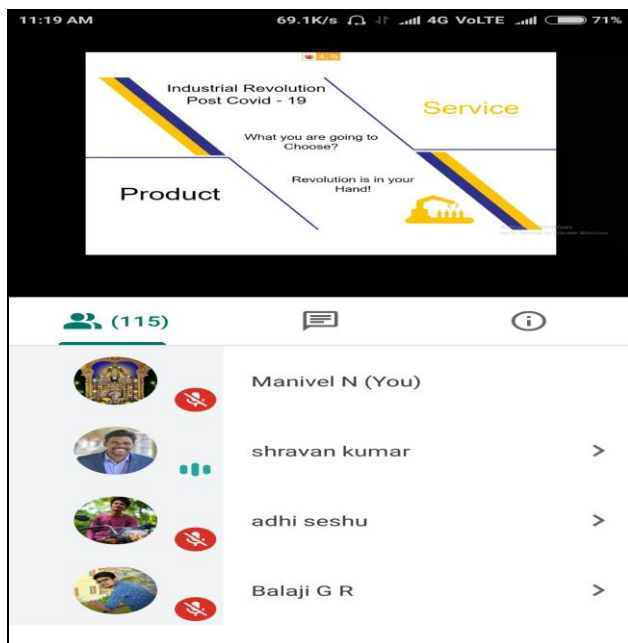
The department Mechatronics Engineering has been arranged a one day Industrial Visit at “**Tvs Upasana Engineering Limited, Hosur**” to the final year Mechatronics Engineering students on 01.03.2021. Mr.N.Manivel, AP/Mechatronics Engineering are the student coordinators.

TECHNICAL WEBINAR

S.No	Title of Event	Chief Guest/Speaker	Date	No. of Participants	Department / Year
1	Challenges in Lean Manufacturing	Mr. R.Shraavan Kumar, Assistant Manager, Physical Logistics, VPS, BMW Group, Chennai Plant.	15.08.2020	115	MCO-II,III,IV & External
2	Recent Trends in Industrial ROBOTS & IIOT	Mr.R.Prasanna, Assistant Manager, FANUC India Limited, Bangaluru.	21.08.2020	73	MCO-II,III,IV & External
3	Global Energy Scenario & Industrial Motor and It's Energy Saving	Mr.J.Prakash, Faculty, Petroleum Conservation Research Association (PCRA), Bangalore.	25.08.2020	190	MCO-II,III,IV & External
4	Essentials Electric Vehicle	Mr.M.P.Ragavendra, Senoir Manager, Lucas TVS,	09.09.2020	98	MCO-II,III,IV &

		Chennai.			External
5	Applications of Programmable Logic Controllers	Mr.P.Jayakumar , Technical Head, IoLogix Automation Solutions, Chennai.	19.09.2020	75	MCO-II,III ,IV & External
6	Challenges and Solutions in Robotics using AI & ML	Dr.R.Sakthivel, Professor, Department of ECE, VIT,Vellore.	06.10.2020	51	MCO-II,III & IV
7	International Webinar On “FUTURE TRENDS IN AUTOMOTIVE TECHNOLOGIES	Dr.J.S.CISAAC JOSHUARAMESH LALVANI, Assistant Professor, Faculty of Mechanical & Production Engineering, Arbaminch Institute of Technology, Arbaminch University, Ethiopia.	01.04.2021	163	MCO-II,III ,IV & External
8	Smart Automation	Mr.R.VIJAY, Maintenance Engineer, Foxcon India Pvt Ltd, Kanchipuram.	13.03.2021	53	MCO-II,III & IV
9	Develop Your Code To Build Battery Charger For E-Vehicle Applications	Mr.S.V.SREERAJ, Director, Technical& Operation, Emcog Solution, Chennai	17.04.2021	101	MCO-II,III ,IV & External
10	Supply Chain For Ev Industry	Mr.ASHHAR AHMED, Skill Development Director,Skill Shark Edutech. Pvt Ltd, Hyderabad,Telangana	10.04.2021	89	MCO-II,III ,IV & External

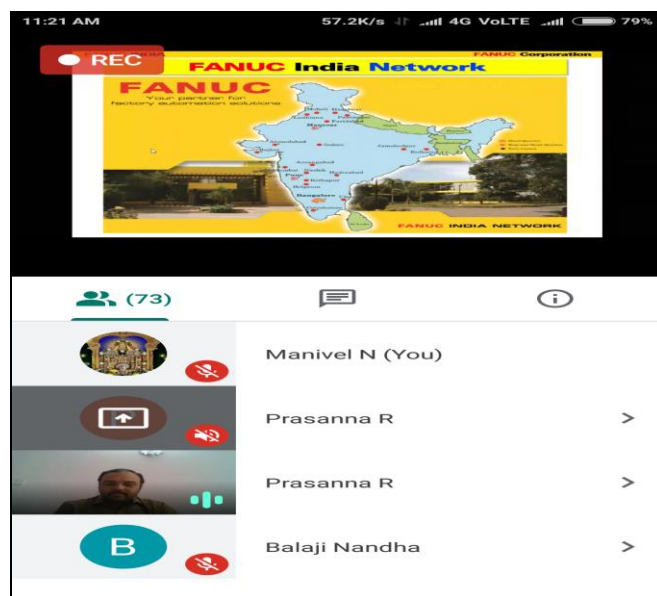
CHALLENGES IN LEAN MANUFACTURING



Technical Webinar on Challenges in Lean Manufacturing

A Technical Webinar on “**Challenges in Lean Manufacturing**” was conducted by Department of Mechatronics Engineering on 15.08.2020 to the Second, Third & final Year students. Mr. R. Shravan Kumar, Assistant Manager, Physical Logistics, VPS, BMW Group, Chennai Plant was the Chief Guest and gave the lecture in the Webinar.

RECENT TRENDS IN INDUSTRIAL ROBOTS & IIOT



Technical Webinar On Recent Trends in Industrial ROBOTS & IIOT

A Technical Webinar on “**Recent Trends in Industrial ROBOTS & IIOT**” was conducted by Department of Mechatronics Engineering on 21-08-2020 to the Second, Third & final Year students. Mr. R. Prasanna, Assistant Manager, FANUC India Limited, Bangalore, was the Chief Guest and gave the lecture in the Webinar.

GLOBAL ENERGY SCENARIO & INDUSTRIAL MOTOR AND IT'S ENERGY SAVING

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 Koneripalli, Hosur 635 117

DEPARTMENT OF MECHATRONICS ENGINEERING

IEEE

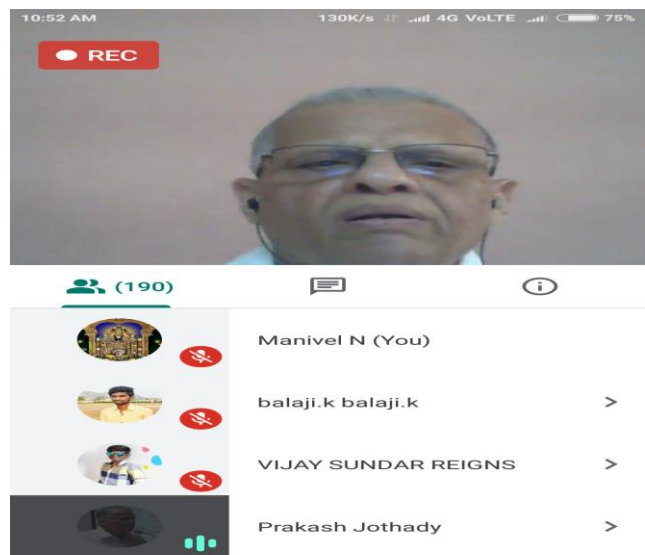
Webinar on
Global Energy Scenario & Industrial Motors and its energy saving

J. Prakash
 Faculty
 PCRA Bangalore

Date 25-08-2020
 10.30am to 12.30pm
 9600749365
 E Mail: hod.mco@gmail.com

Meeting URL
<https://meet.google.com/pnt.upac.khz>

Registration is free



Technical Webinar on Global Energy Scenario & Industrial Motor and It's Energy Saving

A Technical Webinar on “Global Energy Scenario & Industrial Motor and It's Energy Saving” was conducted by Department of Mechatronics Engineering on 25- 08-2020 to the Second ,Third & final Year students. Mr.J.Prakash, Faculty, Petroleum Conservation Research Association (PCRA), Bangalore was the Chief Guest and gave the lecture in the Webinar.

ESSENTIALS ELECTRIC VEHICLE

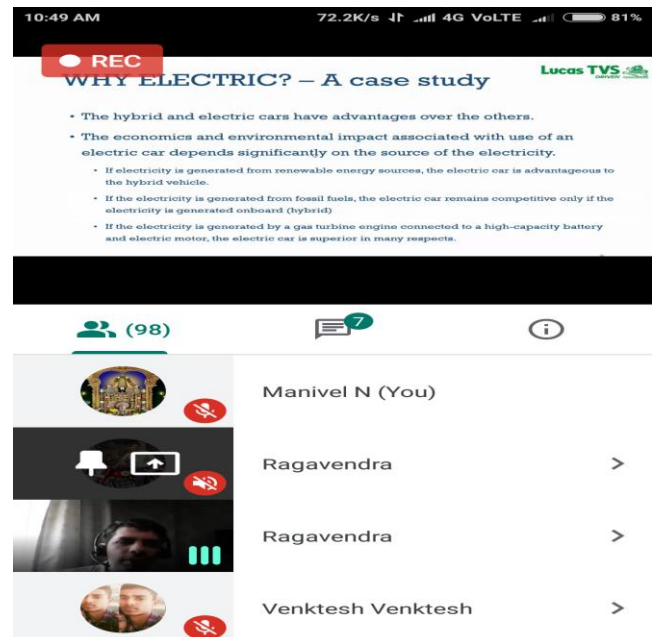
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DEPARTMENT OF MECHATRONICS ENGINEERING

Technical Webinar
on
Essentials of Electric vehicle

Mr. M.P. RAGAVENDRA
 Senior Manager,
 Lucas - TVS, Chennai

Date 09-09-2020 10.30am to 11.30pm E Mail: hod.mco@gmail.com <https://meet.google.com/caf-ftmb-tbq>



Technical Webinar on Essentials Electric Vehicle

A Technical Webinar on “Essentials Electric Vehicle” was conducted by Department of Mechatronics Engineering on 25- 08-2020 to the Second ,Third & final Year students. Mr.M.P.Ragavendra, Senoir Manager, Lucas TVS, Chennai was the Chief Guest and gave the lecture in the Webinar.

APPLICATIONS OF PROGRAMMABLE LOGIC CONTROLLERS

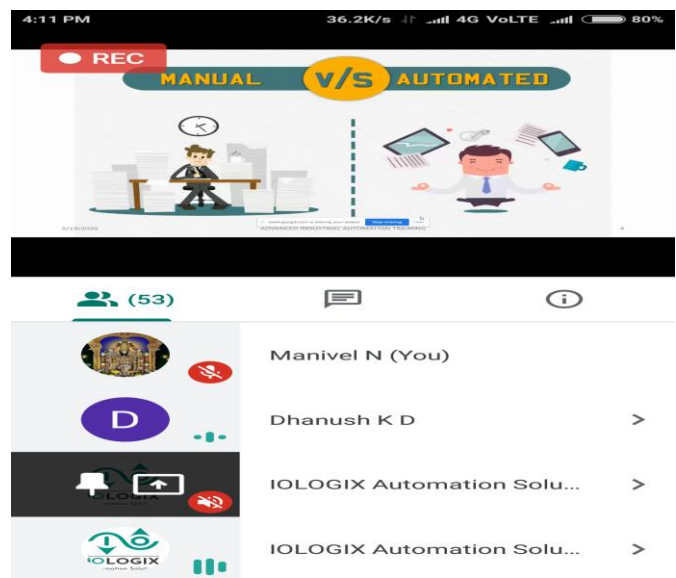
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DEPARTMENT OF MECHATRONICS ENGINEERING

Technical Webinar
 on
Applications of Programmable Logic controllers

Mr. JAYAKUMAR PALANISAMY
 Technical Head,
 IoLogix Automation Solutions
 Chennai

Date 19-09-2020 04.00pm to 05.00pm E Mail: hod.mco@gmail.com https://meet.google.com/ef-fmb-bq



Technical Webinar on Applications of Programmable Logic Controllers

A Technical Webinar on “**Applications of Programmable Logic Controllers**” was conducted by Department of Mechatronics Engineering on 19- 09-2020 to the Second ,Third & final Year students. **Mr.P.Jayakumar**, Technical Head, IoLogix Automation Solutions, Chennai was the Chief Guest and gave the lecture in the Webinar.

CHALLENGES AND SOLUTIONS IN ROBOTICS USING AI & ML

Challenges and solutions in Robotics using AI and ML

Dr. R. SAKTHIVEL
 Micro and Nanoelectronics, VIT
 Email: drs.sakthivel@gmail.com

Video is the Biggest Big Data

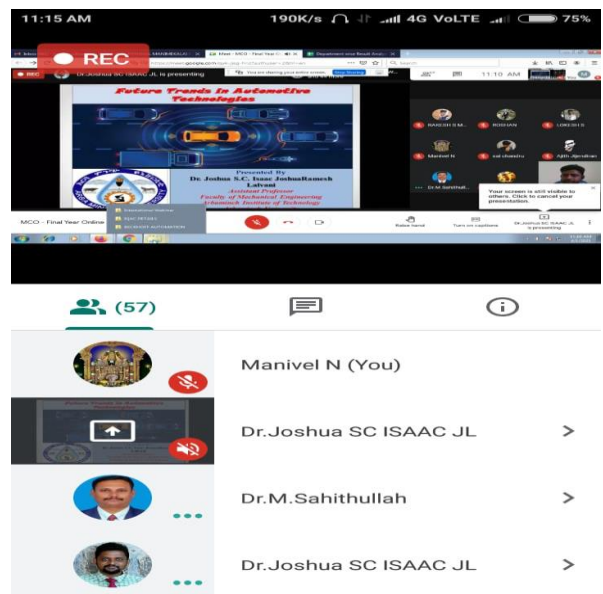
Over 70% of today's Internet traffic is video
 Over 300 hours of video uploaded to YouTube **every minute**
 Over 500 million hours of video surveillance collected **every day**

Energy limited due to battery capacity
 Power limited due to heat dissipation
 Need energy-efficient pixel processing!

Technical Webinar on Challenges and Solutions in Robotics using AI & ML

A Technical Webinar on “**Challenges and Solutions in Robotics using AI & ML**” was conducted by Department of Mechatronics Engineering on 16- 10-2020 to the Second ,Third & final Year students. **Dr.R.Sakthivel**, Professor, Department of ECE, VIT, Vellore was the Chief Guest and gave the lecture in the Webinar.

INTERNATIONAL WEBINAR ON “FUTURE TRENDS IN AUTOMOTIVE TECHNOLOGIES



Technical Webinar on International Webinar On Future Trends In Automotive Technologies

A Technical Webinar on “***International Webinar On Future Trends In Automotive Technologies***” was conducted by Department of Mechatronics Engineering on 01- 04-2021 to the Second ,Third & final Year students. Dr.J.S.CISAAC JOSHUARAMESH LALVANI, Assistant Professor, Faculty of Mechanical & Production Engineering, Arbaminch Institute of Technology, Arbaminch University, Ethiopia. was the Chief Guest and gave the lecture in the Webinar.

SMART AUTOMATION



Technical Webinar on Smart Automation

A Technical Webinar on “***Smart Automation***” was conducted by Department of Mechatronics Engineering on 13- 03-2021 to the Second ,Third & final Year students. Mr.R.VIJAY, Maintenance Engineer, Foxcon India Pvt Ltd, Kanchipuram was the Chief Guest and gave the lecture in the Webinar.

DEVELOP YOUR CODE TO BUILD BATTERY CHARGER FOR E-VEHICLE APPLICATIONS

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Koneripalli, Hosur - 635 117.

DEPARTMENT OF MECHATRONICS ENGINEERING
Technical webinar on Develop your own code to build Solar Battery charger for e vehicle applications

Convener
Dr.M.Sahithullah,
HOD/ Mechatronics

Resource Person
SREERAJ S.V.
DIRECTOR - TECHNICAL & OPERATIONS, EMCOC SOLUTIONS

Event Co-ordinator
Mr.K.Suresh Kumar,
Asst.Prof// Mechatronics

Date: 17.04.2021 Time: 10am to 12pm E-mail: hod.mco@pmctech.org

REC sree raj is presenting

Digital Technology Functional Blocks - Required

Control
Measure Process
Monitor Analysis
Store

Participants: Aishwarya S, SAHJEJA P, Padma Priya, Arun arun, Karthick M, SAMMOSES L, Gridharan J, sree raj, SAKTHIVEL M

MCO - Final Year Online CL...

Technical Webinar on Develop Your Code To Build Battery Charger For E-Vehicle Applications

A Technical Webinar on “**Develop Your Code To Build Battery Charger For E-Vehicle Applications**” was conducted by Department of Mechatronics Engineering on 17- 04-2021 to the Second ,Third & final Year students. Mr.S.V.SREERAJ, Director, Technical& Operation, Emcog Solution, Chennai was the Chief Guest and gave the lecture in the Webinar

SUPPLY CHAIN FOR EV INDUSTRY

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Koneripalli, Hosur 635 117

DEPARTMENT OF MECHATRONICS ENGINEERING
Technical Webinar on Supply Chain for EV Industry

SKILL SHARK

Convener
Dr.M.Sahithullah,
HOD/Mechatronics,

Resource Person
Mr. ASHHAR AHMED,
Skill development Director,
Skill Shark Edutech,Pvt,LTD,
Hyderabad Telangana.

Event Co-ordinator
Mr.C.Khader,
Asst.Prof//Mechatronics,

Date: 09.04.2021 10.00am to 12.00 Noon E Mail: hod.mco@gmail.com https://meet.google.com/qyk-jisg-hnz Cell:9655385078

REC Electric Rickshaws

•CEELON INDIA
•Adapt Motors Pvt Ltd.
•Volta Motors
•Kinetic Green
•Gayam Motor Works
•REEP Industries - REEP Motors
•Mahindra electric
•Ampere Vehicles
•Go Green BOV
•OK play
•Atul Auto Ltd.

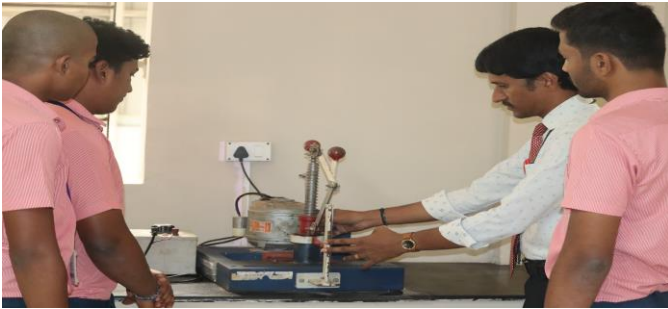
Participants: (35)
Manivel N (You)
Ashhar Ahmed Shaikh
Arun arun
Ashhar Ahmed Shaikh

Technical Webinar on Supply Chain For EV Industry

A Technical Webinar on “**Supply Chain For EV Industry**” was conducted by Department of Mechatronics Engineering on 10- 04-2021 to the Second ,Third & final Year students. Mr.ASHHAR AHMED, Skill Development Director, Skill Shark Edutech. Pvt Ltd, Hyderabad, Telangana was the Chief Guest and gave the lecture in the Webinar

LAB FACILITIES

- Strength of material and Fluid mechanics and Machinery Laboratory.
- Electrical Machines and Drive Laboratory.
- Microprocessor and Microcontroller Laboratory.
- Computer aided machine drawing



Dynamics Laboratory

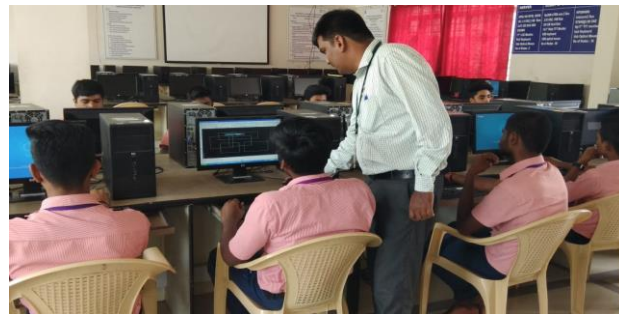
- Power Electronics Laboratory.
- Sensor and Instrumentation Laboratory.
- Dynamics Laboratory.
- Applied Hydraulics and Pneumatics Laboratory.
- Industrial Automation Laboratory.



Manufacturing Laboratory



Applied Hydraulics and Pneumatics Lab.



CAD Laboratory



Electrical Machines and Drive Laboratory

Strength of material Laboratory

