

MOMENTUM

DEPARTMENT OF MECHANICAL ENGINEERING
MANGALAM COLLEGE OF ENGINEERING, ETTUMANOOR

JAN- JUNE, 2022

VISION

To be a center of excellence in Mechanical Engineering by creating innovative and socially responsible technocrats to meet the global challenges.

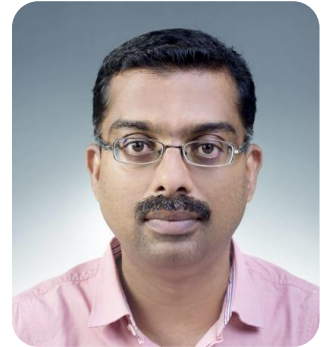
MISSION

1. To provide qualitative technical knowledge in the domain of Mechanical Engineering to compete in the global scenario.
2. To nurture socially committed mechanical engineers through value based education.
3. To enhance the research ability of knowledge seekers for the changing needs of society.

From HOD's Desk

Dear Colleagues & Students,

As the head of the department, I wanted to take a moment to thank all of you for your hard work and dedication to the release of our newsletter MOMENTUM. Your contributions are invaluable to the success of our department and the impact we make in the industry. As we approach the end of another academic year, I wanted to take a moment to reflect on the successes and challenges of the past year.



I am also excited to announce that we will be hosting a series of guest lectures and workshops over the next few months. These events will provide an opportunity for us to hear from industry leaders and learn about new developments in the field. Please be on the lookout for more information on these events in the coming weeks.

Thank you again for all that you do. I look forward to continuing to work with you to advance the field of mechanical engineering.

Sincerely,

Dr. Pratheesh K

Department Summary

The Mechanical Engineering department started in the year 2004, offers both undergraduate (B.Tech.) and postgraduate (M.Tech.) programmes. The annual intake of the B. Tech. programme is 90 students and that of the M. Tech. is 18. The department provides its students an environment that stimulates their intellectual growth and personality development. Infrastructure facilities are excellent with well-equipped labs, classrooms and libraries.

PROGRAM EDUCATIONAL OBJECTIVES

Domain knowledge: Graduates will be able to solve the contemporary issues and challenges in mechanical engineering by applying their strong base in Mathematics, Science and Engineering.

Lifelong learning: Graduates shall have a passion to engage in lifelong learning process through self study, continuing education and professional studies in engineering.

Creative skillset: Graduates will become an effective innovator, to address social, technical and business challenges by enhancing their technical competencies, communication skill and team spirit.

PROGRAM SPECIFIC OBJECTIVES

PSO 1: Able to identify, formulate design and analyze the contemporary challenges and engineering problems in the realm of Design, Industrial and Thermal sciences, utilizing latest technology.

PSO 2: Able to provide solutions by incorporating innovative ideas on product design and development to conquer the challenges in core mechanical sectors, business and other related fields.

Department Activities

- Webinar on “Discover Your Future Opportunities” by Mr. Hakhil & Mr. Sumesh Avodha Educations was conducted on 22/01/2022.
- Webinar on “Opportunities In Product Design” by Core Institute of Technology was conducted on 22/01/2022.
- Expert talk on “Engineering Graphics” by Dr. Shamim I, Professor, Baselios Mathews II College of Engineering was conducted on 18/01/2022
- Expert Talk on “Smarter Machines” by Mrs. Priyarenjini, PhD Scholar, Visvesvaraya Technological University was conducted.
- Inauguration of IEI Students chapter was done by Mr. P A Salahudheen FIE, Chairman, IEI Kochi and Talk on “Engineering Education: Opportunities And Challenges In Covid-19 Era” by Mr. V Vijayachandran Nair MIE, National Council Member, IEI was conducted on 24/01/2022.
- Inauguration of Innovation club was done on 23/02/2022 by Dr. Pratheesh K, Head of the Department.
- Expert talk on “Polymer Composites for Engineering Applications” by Dr. Srikanth M S, Assistant Professor, VIT was conducted on 4/02/2022.
- Webinar on “CNC And CMM For Engineering Application” by Dr. Arun Unnikrishnan, IIT Bombay was conducted on 8/02/2022.
- Expert Talk on “Opportunities After Engineering through Gate And ESE” by Mr. S Manimohan Trinath, Sr. Faculty, ACE Academy, Hyderabad was conducted on 19/02/2022.
- Webinar on “An Overview Of HVAC And Refrigeration System” by Tito Elias Jacob, MEP Engineer, Japan Construction, Bahrain was conducted on 18/02/2022.
- Webinar on “Industrial Engineering And Optimisation” by Prince O M, Assistant Manager-QA, Kerala Agro Machinery Corporation LTD was conducted on 23/02/2022.
- Webinar on “Role Of Industrial Engineering In Modern Manufacturing Environment” by Yadukrishna S, Operational Excellence Associate, Endo India International was conducted on 28/05/2022.
- Webinar on “Latest Advances In Automotive Thermal Systems” by Vibin Jacob, Manager –R&D, Force Motors, Pune was conducted on 25/06/2022.



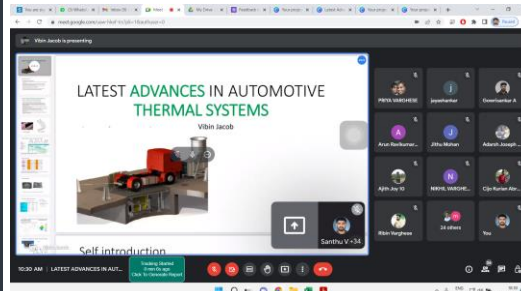
Department Activities

- Webinar on “Opportunities In Oil & Gas, QA/QC & NDT For Mechanical Engineers” was conducted on 25/06/2022.
- Expert Talk on “Introduction To Computational Fluid Dynamics For Design And Analysis Of Thermo-fluid Problems” by M.Mahendran, Senior Engineer, Metacomp Technologies, Chennai was conducted on 13/02/2022.
- Expert Talk on “Maslow's Theory Of Motivation” by Dr. Tony P Jose, Asst. Professor, VIT was conducted on 06/04/2022.
- Expert Talk on “Opportunities In Marine Sector For Mechanical Engineers” by Faizal Farook, Director, Accurant Engineers & Consultants Pvt Ltd was conducted on 11/05/2022.
- Expert Talk on “Selection Of Pumps For Water Supply Schemes” by Dr.Favas T.K, Assistant Professor, Department of Ship Technology, CUSAT was conducted on 18/06/2022.
- Hands On Workshop On “Product Design and Development” by Solidcad Kottayam for 2019-23 batch students was conducted on 23/02/2022, 24/02/2022.
- One Day Workshop on AUTOCAD 2022 for 2020-24 batch students was conducted by CAD centre on 29/01/2022.
- Short Term Course on 3-D Printing was conducted from 31/03/2022 to 04/04/2022. Dr. Bharat Vinjamuri, Professor, Global Academy of Technology, Bangalore & Mr. Sreekanth P, CEO, EMI Product were the resource persons.
- Faculty Development Program on Fusion 360 was conducted in association with Autodesk on 29/06/2022.
- IEI Kochi Chapter organised webinars on Kerala Silver line Project- Myth and Reality & K-rail Project: Through the eyes of a spatial planner. Our students participated for the webinar.
- 16th Alumni meet was conducted on 22/01/2022.
- Poster Designing competition on Sustainable engineering was conducted on 2/03/2022 by IEI Students Chapter

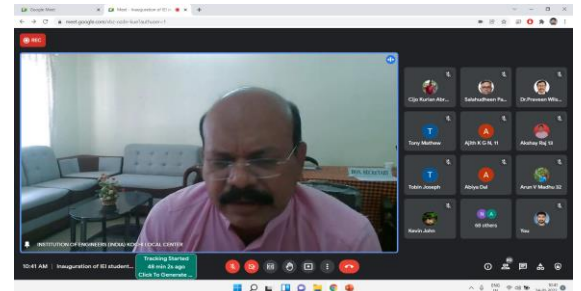


Social Service
@ Abhaya Bhavan, Kottayam

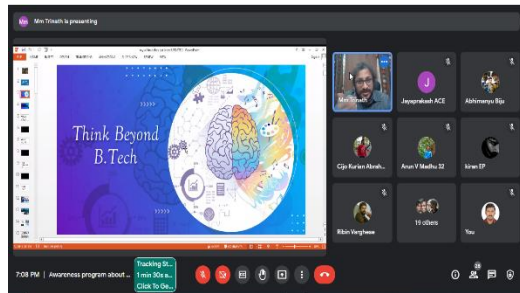
GALLERY



Latest Advances In Automotive Thermal Systems



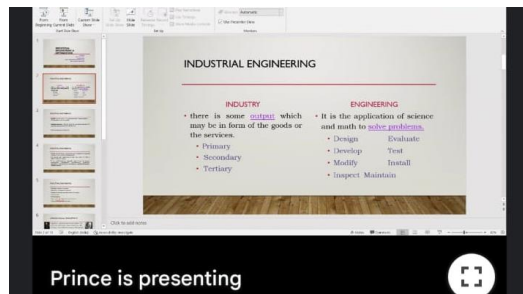
Engineering Education: Opportunities And Challenges In Covid-19 Era



Opportunities After Engineering through Gate And ESE



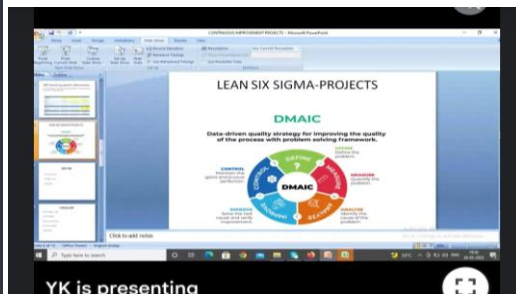
CNC And CMM For Engineering Application



Industrial Engineering And Optimisation



An Overview Of HVAC And Refrigeration System



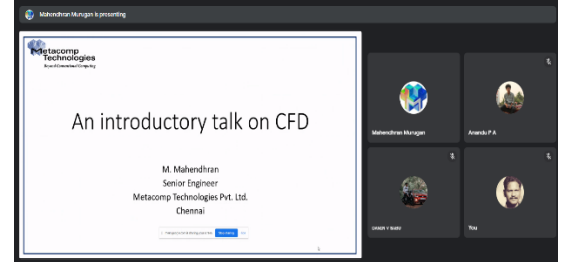
Role Of Industrial Engineering In Modern Manufacturing Environment



Polymer Composites For Engineering Applications



Selection Of Pumps For Water Supply Schemes

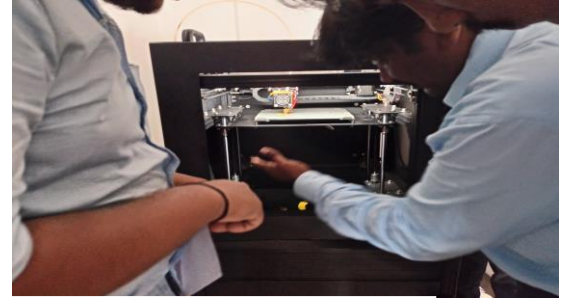


Introduction to CFD For Design And Analysis Of Thermo-fluid Problems



Opportunities In Oil & Gas, QA/QC & NDT For Mechanical Engineers

Opportunities In Marine Sector For Mechanical Engineers



Short Term Course On 3-D Printing



Hands On Workshop On Product Design and Development



Faculty Development Program on Fusion 360

Prize distribution of Poster designing competition on Sustainable Engineering

First Prize

Anandhu P A (S4 ME B)

Second Prize

Ashbel Ann (S2 ECE)

Kannan Biju (S4 ME A)

- Abhinand Vijay has attended 2 day workshop on Electric and future Mobility organised by Techmagi on 14/05/2022 & 15/05/2022.
- Sony Antony has attended 7 days internship program on 3D Printing and Modeling conducted by Alphasys 3D Printing Solutions from 15/06/2022.
- Sijo John has completed 5 days internship program on Embedded Systems & Robotics conducted by Alphasys 3D Printing Solutions from 12-02-2022.
- Noyal Binoy, Amal Dev H, Kannan Biju, Karthik Jeevan, Aswin P B, Vishal Sasidaran, Aswin K S has completed 5 Day internship with Hands on Experience on Electrical Vehicles organized by Techmaghi from 05/01/2022.
- Amal Dev H, Nikhil Varghese, Jithu Mohan has completed the MOOC course on Manufacturing Process Technology I & II by NPTEL.
- Athul Raj TJ has completed completed 5-Day Internship on Introduction to Machine Learning from 20/04/2022.
- Adhil Ahzam has successfully completed 2 months course on ECU Tuning & Remaps Level 1 offered by ReynLab through Techmaghi.
- Saran Sasidharan has achieved First place in Mystical Carnival in NAKSHATRA 2022
- Sajin K John, Parvathy Parthasarathy, Kevin John, Justin K Kurian, Jithin G Nair, Famy Antony, Athul V Prasannan, Ashik Suresh, Aravind Shine, Amal Jagadeesh, Adithya Shine has completed the MOOC course on IC Engines and gas turbines by NPTEL.
- Justin K Kurian has completed the course on Fusion 360 by ASAP with A+ grade
- Jestin Varkey has completed the course on The Fundamentals of Digital Marketing by Google Digital Garage
- Ceril M Mathew, Bijoy, Bibin Varghese, Begin Abraham, Arjun P, AKshay PS has secured First Prize for Nadan Pattu in SAPTHARANG 2K22 by MLMCE
- Ceril M Mathew, Bijoy, Begin Abraham, Arjun P, Akshay P S has secured Second Prize for Theme Dance in SAPTHARANG 2K22 by MLMCE
- Balakrishna K P, Arun V Madhu, Anand K Raj, Amalkumar PP, Alex Mathew George, Akshay Raj, Ajith KGN, Abhinand Vijay has successfully completed the MOOC course on Principles of Casting Technology by NPTEL.
- Kiran E P, Joel Jaimon secured First Prize for Mech Factory in NAKSHATRA 2022.
- Akash Vijay, Aswin Abraham, Ajith Shaji, Narayanan S, Jithin Raj, Nihans Nizar, Sarath Babu, Sreenath K S has completed the MOOC course on Fundamentals of Welding Science & Technology by NPTEL.
- Nakul Suresh has completed the MOOC course on Applied Ergonomics by NPTEL.
- Nevin Philip John has completed 1 month course on Quality Control Engineering by PACS Academy
- Renith PR has completed the MOOC course on Air Pollution and Control by NPTEL.
- Sachin Sunil, Sanath Koshy, Vishnu V has completed the MOOC course on Enhancing Soft skills & Personality by NPTEL.
- Sreerag M has completed the MOOC course on Fundamentals of Automotive systems by NPTEL.

- Patent on Energy Meter reading System over internet was filed by Dr.Pratheesh K
- Patent on A system for block chain based threat detection in a network security system was filed by Dr.Pratheesh K
- Patent on Effect of management information system on operative human resource management in an association was filed by Dr. Rabi J
- Dr.Pratheesh K published a book on Smart Manufacturing Technology
- Dr.Pratheesh K published a book on Engineering Mechanics
- Mr.Amal Krishna has published a paper A comprehensive review on building integrated photovoltaic systems: Emphasis to technological advancements, outdoor testing, and predictive maintenance in Renewable and Sustainable Energy Reviews, 2021
- Dr. Manuel George has published a paper on Elastic Property Evaluation of FRP using Sugarcane Bagasse fibre in IRJET, June 2022
- Mr.Rajeev K Mohan has published a paper Analysis of vertical Axis Wind Turbine with increasing the Number of blades and changing the material in IRJET, June 2022
- Mr.Shinto Baby has published a paper Elastic Property Evaluation of FRP using Sugarcane Bagasse fibre in IRJET, June 2022
- Mr.Hariprasad K.S has published a paper Solar Powered Supercharged IC Engine for Motorcycles in IRJET, June 2022
- Mr.Aneesh K.S has published a paper Analysis of Thermal Management System of cylindrical lithium ion batteries in Electric vehicles in IRJET, June 2022
- Mr.Amal Krishna has published a paper Computer Aided Designing and simulation of Radial Fatigue Test of Automobile wheel rim using ANSYS in IRJET, June 2022
- Mr.Abin Babu has published a paper Performance Enhancement of heat Exchangers using vortex flaps in IRJET, June 2022
- Mr.Santhu Varghese Thomas has published a paper Piezoelectric Thermo –Acoustic Refrigeration System with Peltier module Energy generation in IRJET, June 2022
- Mr.Tony Mathew has published a paper Experimental and Numerical Analysis of An Automobile Cabin Thermal Management Using PCM in IRJET, June 2022
- Dr.Rabi.J has published a paper Design and analysis of inlet Manifold with Vortex generator in GDI Engine in IRJET, June 2022
- Mr. Aneesh K S & Mr. Santhu Varghese attended 4 weeks FDP on Inspection And Quality Control In Manufacturing by NPTEL, IIT Madras
- Mr. Shinto Baby has attended 5 days FDP on Sustainability Engineering by ATAL.
- Mr. Premjith S attended 5 days FDP on Artificial Engineering and Machine Learning -A Mechanical Engineering Perspective by SCMS
- Mr. Premjith S & Mr. Navish Kumar has attended 5 days FDP on 3D Printing & Additive Manufacturing by Musaliar College
- Mr. Navish Kumar has attended 3 days FDP on Advances in Energy and Environmental Research by Providence college

Torque X



Farewell 2018-22 Batch



Editorial

Dr. Pratheesh K
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