

MOMENTUM

*DEPARTMENT OF MECHANICAL ENGINEERING
MANGALAM COLLEGE OF ENGINEERING, ETTUMANOOR*

JULY- DEC, 2023

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,

I am pleased to introduce this edition of our department's newsletter to all. It gives me great pleasure to share the activities and achievements of the Department of Mechanical Engineering during the period **July to December 2023**. This period was particularly significant for the department as we continued our efforts towards strengthening academic quality, professional development, and student engagement.

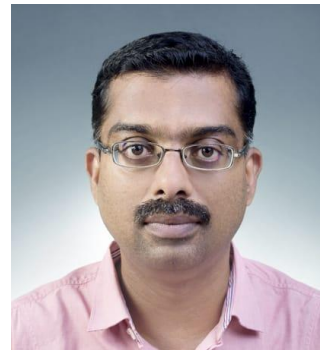
A major milestone for the department was the achievement of **NBA accreditation in June 2023, valid up to 30 June 2026**. This recognition reflects the collective efforts of our faculty members, students, and supporting staff towards maintaining quality in teaching, learning, academic practices, and continuous improvement.

The department remained committed to providing students with meaningful academic and technical exposure through various programmes and activities. Faculty members also continued to contribute towards enhancing the academic environment through professional development, research, and knowledge-sharing initiatives.

I sincerely appreciate the dedication and cooperation of all faculty members and students in achieving our departmental goals. I am confident that the momentum created through these initiatives will continue to guide us towards higher standards of academic and professional excellence.

Sincerely,

Dr. Pratheesh K



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

- Seminar on IR Imaging in Aerospace Applications conducted on 21 October 2023. Resource Person: Dr. S. Venkatesan.
- Expert Talk on Elements of Gas Turbine Power Plants conducted on 26 October 2023. Resource Person: Mr. Manu S Das, Assistant Professor, Amrita School of Engineering, Amrita Vishwa Vidyapeetham.
- Workshop on NDT Essentials and Bridging Theory and Practice conducted on 16 November 2023. Resource Person: Mr. Ajik K. Rajan, Faculty Core Institute of Technology, Kottayam.
- Association Inauguration conducted on 13 November 2023.
- Technical Talk on Practical Applications of Design Engineering conducted during the period. Resource Person: Mr. Anoop A Pillai, Senior Engineer, Matherson Technology Service Ltd.
- Technical Talk on Introduction to Computational Fluid Dynamics conducted on 15 December 2023. Resource Person: Dr. Favas T K, Assistant Professor, CUSAT.
- Expert Talk on Vaccine Supply Chain conducted on 17 November 2023. Resource Person: Mr. Abyson Scaria, Assistant Professor, St. Joseph's College of Engineering and Technology.
- Expert Talk on Climate Change and Global Warming conducted on 28 November 2023. Resource Person: Dr. Tony P Jose, Associate Professor, VIT Vellore.
- FDP on Advances in Subtractive and Additive Manufacturing Technologies conducted from 04 to 09 December 2023.
- Seminar on Disaster Management Measures in KSEBL conducted on 18 December 2023. Resource Person: Ms. Anjana Baby, Assistant Engineer, Civil Transmission Division, Kanjirappally.
- Hands-on Training on Industrial Safety Equipment and First Aid conducted on 24 November 2023. Resource Person: Mr. Shijil, Senior Fire & Rescue Officer, Fire & Rescue Station, Kottayam.
- Expert Talk on Energy Audit conducted during the period. Resource Person: Prof. C. Thangavel.



Students' Corner

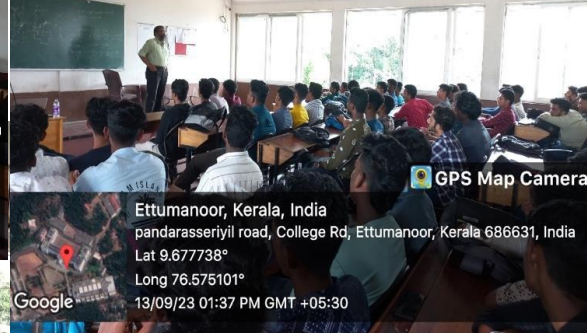
- Ansal P Haris – participated in Energy Quiz – 31 October 2023.
- Anin Joseph – participated in Energy Quiz – 31 October 2023.
- Anin Joseph – participated in Poster Presentation – 27 October 2023.
- Libin Thomas – participated in Energy Quiz – 31 October 2023.
- Aswanth Jayan – participated in Energy Quiz – 31 October 2023.
- Albin Biju – participated in 38th National Convention of Electronics & Telecommunication Engineers – 27 October 2023.
- Ajaygosh M S – participated in 38th National Convention of Electronics & Telecommunication Engineers – 27 October 2023.
- Adwaith K A – participated in 38th National Convention of Electronics & Telecommunication Engineers – 27 October 2023.
- Afsal V S – participated in 38th National Convention of Electronics & Telecommunication Engineers – 27 October 2023.
- Anandu V Pradeep – participated in Technical Quiz – 17 November 2023.
- Ananthkrishnan B – participated in Technical Quiz – 17 November 2023.
- Amal Jacob – participated in Technical Quiz – 17 November 2023.
- Vishnu Haridas – participated in Technical Quiz – 17 November 2023.



Faculty Corner

- **Mr. Premjith S**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – Mangalam College of Engineering & AICTE ATAL – **04–09 December 2023**.
- **Mr. Johan George Cherian**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – Mangalam College of Engineering & AICTE ATAL – **04–09 December 2023**.
- **Dr. Manuel George**, Associate Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – Mangalam College of Engineering & AICTE ATAL – **04–09 December 2023**.
- **Mr. Albert Mathew**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Tony Mathew**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Dr. Rabi J**, Associate Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Navish Kumar**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Rajeeve K Mohan**, Associate Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Dr. Bibin K S**, Associate Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Jishnu M**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Ajithkumar K T**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Harikrishnan R**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Benphil C Mathew**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Mr. Dona Thomas**, Assistant Professor – participated in *Advances in Subtractive and Additive Manufacturing Technologies* – **04–09 December 2023**.
- **Dr. Manuel George**, Associate Professor – participated in *Novel Technologies in Nanotechnology* – Model Engineering College & AICTE ATAL – **06–11 November 2023**.
- **Dr. Manikandan H**, Professor – participated in *Novel Technologies in Nanotechnology* – Model Engineering College & AICTE ATAL – **06–11 November 2023**.

INDUCTION PROGRAM 2023



ATAL FDP



Publications

- Dr. Manuel George – published research paper Buckling, bending and dynamic analyses of laminated three-phase polymer/graphene/carbon fiber composite rectangular plates – Structures, 2023.
- Dr. Manuel George – published research paper Enhancement of vibrational characteristics of rotating CFRP composite tapered plates reinforced by graphene nanoparticles – Polymer Composites, 2023.
- Dr. Manuel George – published research paper Characterization of material, mechanical, static bending and vibration properties of glass fiber composite panels reinforced with graphene nanofillers – Journal of Manufacturing Processes, 2023.
- Dr. K. Pratheesh – published research paper Investigation and Optimization of Tribo-Mechanical Behavior of Squeeze Casted Al-Si Piston Alloy-Based Metal Matrix Composite Using Response Surface Methodology and Neural Network – Surface Review and Letters, 2023.
- Dr. Manuel George – published research paper Design of Flexible Mobile Platforms for Industrial Elevation Tasks – 2023.

NPTEL Courses

- Dr. Manikandan H, Professor – completed NPTEL course on Industrial Safety Engineering – 12 weeks.
- Dr. Manikandan H, Professor – completed NPTEL course on Sustainable Energy Technology – 12 weeks.
- Dr. Manikandan H, Professor – completed NPTEL course on Product Design and Development – 4 weeks.
- Dr. Manikandan H, Professor – completed NPTEL course on Blockchain and its Applications – 12 weeks.
- Dr. Manikandan H, Professor – completed NPTEL course on Carbon Materials and Manufacturing – 12 weeks.
- Dr. Manikandan H, Professor – completed NPTEL course on Fundamentals of Automotive Systems – 12 weeks.
- Dr. Manikandan H, Professor – completed NPTEL course on Operations Management – 12 weeks.

Editorial

Dr. Pratheesh K
Mr. Rajeeve K Mohan
Mr. Santhu Varghese
Devan Sarath
(Student Editor)
Preethi Satheesh
(Assistant Editor)
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