

MEXPRESS

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Mechanical Engineering Association
Department of Mechanical Engineering
KUMARAGURU COLLEGE OF TECHNOLOGY



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From the Editors...

Dear Readers,

It's my pleasure to introduce this edition of MExpress. This issue contains achievements from both our esteemed faculty and our talented students.

In this edition, we provided the details of faculty members acted as resource persons where you'll find their recent speaking engagements at conferences and workshops. Their thirst for knowledge extends beyond the classroom. The "Faculty Publications" section highlights their latest research contributions, keeping you informed on the cutting-edge work happening at our institution.

Collaboration is key to progress. The "Collaborative Activity" section showcases successful partnerships between departments and external organizations, highlighting our commitment to innovation and fostering a collaborative spirit.

Their dedication deserves recognition. The "Faculty Awards" section proudly displays the recent awards received by our faculty members, a testament to their remarkable achievements.

Beyond their academic pursuits, our faculty stay actively engaged in their respective fields. The "Faculty Participations" section highlights their involvement in professional activities such as participations in various faculty development programmes, seminars, workshops, etc.

Our students are our future. This edition takes immense pride in featuring their accomplishments in the "Student Participations" section. Read about their triumphs in competitions. Their dedication and talent are truly inspiring.

The "Snap Shots" section captures these moments through engaging photos of events of faculty activities.

This newsletter is a collaborative effort. We strive to provide a platform for celebrating achievements, fostering a sense of community, and keeping everyone connected.

Feel free to share your feedback and suggestions for future editions. We are always looking for ways to improve and better serve our readers.

Happy Reading!

Warm regards,

Editors....



Department Activities

FACULTY AS RESOURCE PERSONS



Dr. B. N. Sreeharan, Assistant Professor – III, acted as a resource person and delivered a webinar on “Excel Dashboards” to the students of upGrad Learning Center, Hyderabad on 20-06-2024

FACULTY PUBLICATIONS

Dr. M. A. Vinayagamoorthi, Assistant Professor – III, published a paper titled “Automatic Tool Changer Enabling in Automation Press Line”, in the Volume 10 Issue 5 of International Journal for Science and Advance Research in Technology (IJSART) on 29-06-2024.



COLLABORATIVE ACTIVITY



Our faculty members, **Dr. C. Vemurugan**, Professor and HoD, **Dr. R. Manivel**, Professor, **Dr. B. Senthilkumar**, Associate Professor, **Dr. M. A. Vinayagamoorthi**, Assistant Professor – III, visited the Mechanical Engineering Department of COEP Technological University and MIT World Peace University and MIT Art, Design, & Technology University Kothrud, Pune on 25-06-2024.

AWARDS



Dr. B. N. Sreeharan, Assistant Professor – III, was recognized as IOP Trusted Reviewer by IOP Publishing on 19-06-2024. He also completed a course on QUIZZ and awarded as “Game Changer” on 29-06-2024.

FACULTY PARTICIPATIONS

Following faculty members participated in an FDP on Latest Trends in Additive Manufacturing from 03-06-2024 to 07-06-2024 organized by Dr. M. G. R Educational and research Institute.

Dr. V. R. Muruganatham, Associate Professor

Mr. P. D. Devan, Assistant Professor - II

Dr. M. Thirumalai Muthukumar, Assistant Professor – III

Dr. M. A. Vinayamoorthi, Assistant Professor – III



Dr. B. N. Sreeharan, Assistant Professor – III participated in an FDP on “Clean Energy for Sustainable Development” from 10-06-2024 to 14-06-2024 organized by Arjun College of Technology. He also participated in a “Microsoft Copilot Live Master Class” organized by Skill Nation on 20-06-2024.



STUDENT PARTICIPATIONS:

- Following students participated in International Astronomy and Astrophysics Competition honoured as detailed below.

Mr. U. Suriya Prakash (22BME114) - Gold honour

Mr. S. Aruthra (22BME013) - Silver honour

Ms. P. Kirubashini (22BME050) - Silver honour

- **Mr. T. Naveen Murugesh** (22BME066), one of the members in Team Sea Sakthi, which is the first team from India to participate for the third consecutive year at the prestigious Monaco Energy Boat Challenge, organized by the Yacht Club de Monaco. This year, they have won four distinct accolades: Design Prize, Innovation Prize, Town Hall Cup (second consecutive year) and Communication Prize (third consecutive year).

SNAP SHOTS



Our faculty members @ COEP University



Our faculty members @ MIT-WPU



KUMARAGURU
college of technology

COIMBATORE – 641 049

Department of Mechanical Engineering

INSTITUTE VISION:

The vision of the college is to become a technical university of International Standards through continuous improvement.

INSTITUTE MISSION:

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic, and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

DEPARTMENT VISION:

To emerge as a centre, that imparts quality higher education through the programme in the field of Mechanical Engineering and to meet the changing needs of the society.

DEPARTMENT MISSION:

The department involves in sustained curricular and co-curricular activities with competent faculty through teaching and research that generates technically capable Mechanical Engineering professionals to serve the society with delight and gratification.

B. E. MECHANICAL ENGINEERING

PROGRAM EDUCATIONAL OUTCOMES (PEO's):

- PEO 1 :** Graduates will take up career in manufacturing and design related disciplines.
- PEO 2 :** Graduates will be involved in the execution of Mechanical Engineering projects.
- PEO 3 :** Graduates will take up educational programme in mastering Mechanical sciences and management studies.

PROGRAM OUTCOMES (PO's):

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSO's):

1. Apply the fundamentals of science and mathematics to solve complex problems in the field of design and thermal sciences.
2. Apply the concepts of production planning and industrial engineering techniques in the field of manufacturing engineering.

M. E. INDUSTRIAL ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES (PEO's):

- PEO 1 :** Graduates will be mid to higher level management / engineering professionals with responsibilities in engineering management, data analysis and business operations.
- PEO 2 :** Graduates will be engineering professionals, and technology leaders who would manage such functions as plant engineering, production, supply chain and quality management.
- PEO3 :** Graduates would function as educators or researchers in academic institutions.

PROGRAM OUTCOMES (PO's):

- P01 :** An ability to independently carry out research /investigation and development work to solve practical problems.
- P02 :** An ability to write and present a substantial technical report/document.
- P03 :** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
- P04 :** Apply knowledge and competencies in manufacturing, analytics, supply chain, quality and engineering management.
- P05 :** Apply principles of industrial engineering to solve problems in industry.
- P06 :** An ability to work as part of interdisciplinary teams, communicate effectively, model and design engineering systems optimally.