



VISWAJYOTHI

COLLEGE OF ENGINEERING & TECHNOLOGY

Approved by AICTE New Delhi & Affiliated to APJ Abdul Kalam Technological University



NEWS LETTER

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MECHNANIMOUS

DEPARTMENT OF MECHANICAL ENGINEERING

INSTITUTE VISION

“Moulding Professionals par Excellence with Integrity Fairness and Human Values”.

INSTITUTE MISSION

1. We commit to develop the institution as a Center of Excellence of International Standards
2. We guide our students in the attainment of intellectual and professional competence for successfully coping with the rapid advancements in technologies and the ever changing world of business, industry and services
3. We help each and every student in their personal growth into mature and responsible individuals
4. We strive to cultivate a sense of social and civic responsibility in our students, thus empowering them to serve humanity.
5. We promise to ensure a free environment where quest for the truth is encouraged

DEPARTMENT VISION

“Moulding socially committed engineers capable to meet the global challenges in the mechanical engineering stream.”

DEPARTMENT MISSION

- ➔ To provide ample facilities to foster excellent ambiance for teaching learning process in the department.

- ➔ To enhance the creative ideas, analytical talents and soft skills in the students to cope up with the emerging trend in technical field.
- ➔ To enable the students to meet real life problems in mechanical engineering with a zeal to human and ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Our graduates shall have

- PEO1 Strong base in Mathematics, Science, and Mechanical Engineering to face and handle the challenges in real world engineering problems in society and industry.
- PEO2 Passion for Mechanical Engineering to select an area of specialization, pursue higher studies, choose a career, lifelong learning in industry, research and academics.
- PEO3 Basic knowledge in other disciplines to tackle and coordinate Interdisciplinary real life problems
- PEO4 Soft skills, discipline, confidence, self esteem, and ethical values.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- PSO1 Students shall be competent, creative and imaginative mechanical engineers employable in fields of design, research, manufacturing, safety, quality, technical services.
- PSO2 Students shall be able to progress through advanced degree, certificate programs or participate in continuing education in mechanical engineering, business, and other professionally related fields.

PRINCIPAL'S MESSAGE



A dream doesn't become reality through magic; it takes sweat, determination and hard work. It is this that makes our students empowered. The Department of Mechanical Engineering stands to prove that education means much more than merely acquiring knowledge. It is acquisition of knowledge and skills, building character, improving employability of the young talents and future leadership. I whole-heartedly appreciate the willing contribution of the teaching and non-teaching staff and overwhelming response and enthusiastic participation of our students in the college activities. The students are motivated to "always aim high" and cultivate core values

Dr. K.K.Rajan

HOD'S MESSAGE



Dear All,

It's a great pleasure to write the foreword for this edition.

Welcome to our 13th Vol. 2nd Issue of "Mechnanimous"! I am very excited to launch this newsletter which will inform and inspire you on a half yearly basis with all things décor, both for academic and non-academic activities.

Our department give more attentions for student support, mentoring, tutoring, study skills workshops, and career development. Out students complete their studies with their year-long capstone project, which requires design thinking, creative thinking, project planning, problem solving and teamwork.

Department organized a National Level Faculty Development Program Fully Sponsored by KTU on "DATA ANALYTICS FOR DECISION MAKING".

I would like to thank the entire editorial team for their tireless efforts, revisions, and support in publishing the newsletter in its current form.

Dr. Shunmugesh K

INTRODUCTION

The Department of Mechanical Engineering has three tenets that center on the principle of improving lives and livelihoods: to create knowledge through research in the science and technology of mechanical engineering; to share knowledge through educational programs and the dissemination of our new discoveries; and to develop the professional potential of faculty, staff, and students. Mechanical Engineering department expands the frontier of human knowledge in the discipline of mechanical engineering through fundamental and applied research conducted by faculty and students. Through initiative and innovation, we expand the frontiers of the mechanical engineering profession. Our land-grant mission is based on the premise that knowledge is beneficial to mankind and the greatest benefit comes from dispersing knowledge as widely as possible. We share knowledge with our students through educational programs and all of society through disseminating our research findings in scholarly publications, presentations, patents, entrepreneurship, and technology transfer. Through classroom, laboratory, and project-based instruction, undergraduate and graduate students are well served by a curriculum that is based upon the fundamental principles of mechanical engineering, as well as forward looking and set within the context of our profession's social mandate. Our curriculum prepares students for diverse and successful careers across the global engineering marketplace, and it further fosters creativity and critical thinking skills through research and design experiences

MESSAGE FROM THE EDITORIAL BOARD

In the past semester, our department has successfully implemented a variety of curricular and co-curricular activities. The involvement of mechanical engineering faculties in various training programs and conferences has been particularly beneficial, and this is something we intend to continue in the future. Through regular seminars, symposiums, workshops, industrial visits and industrial training, students have been provided with the technical expertise, critical thinking skills and creativity necessary to excel in the engineering profession. Our department is dedicated to providing a positive environment for the growth of young engineers into future-oriented professionals. We are confident that we are on the right track and would like to express our appreciation for the efforts of the faculty and staff to make our department the ideal destination for mechanical engineers.

Additionally, our department has active research groups for conducting collaborative and inter-disciplinary research, as well as state-of-the-art research facilities

FACULTY ACHIEVEMENTS

➤ **Dr. Aravind S** was awarded Ph.D from Department of Mechanical Engineering, IIT Madras. Thesis title "Investigation on Machined Holes through Indigenously Developed Electrochemical Machining Setup with IEG Control"



RESEARCH PAPERS IN JOURNALS AND CONFERENCES

- **Arun Raphel**, P. Vivekanandhan, A. K. Rajasekaran, and S. Kumaran, "Tuning thermoelectric figure of merit in Ag doped nanostructured PbSnTeSe alloy by entropy and band engineering phenomena," *Materials Today Communications*, vol. 35, p. 105880, Jun. 2023, doi: 10.1016/j.mtcomm.2023.105880. (SCI indexed)
- L. Bhanuprakash, N. Manikandan, **Arun Raphel**, and G. S. Mangalathu, "Experimental investigation on mechanical properties of Kenaf fibre reinforced epoxy composites with annona squamosa powder," *Materials Today: Proceedings*, Jun. 2023, doi: 10.1016/j.matpr.2023.06.247. (SCOPUS indexed)
- **K. Shunmugesh**, **Arun Raphel**, **T. G. Unnikrishnan**, and K. T. Akhil, "Finite element modelling of carbon fiber reinforced with vespel and honey-comb structure," *Materials Today: Proceedings*, vol. 72, pp. 2163–2168, Jan. 2023, doi: 10.1016/j.matpr.2022.08.301. (SCOPUS indexed)
- Harigovind S, **Shunmugesh K.** Multi response optimization and regression analysis of milling parameters of jute fibre reinforced epoxy composite. *Materials Today: Proceedings*. 2022 Sep, 72, 2169-2173, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.08.344>. (SCOPUS indexed)
- Mathew S, **Shunmugesh K.** Application of grey-fuzzy logic for the optimization of drilling parameters for coir fibre reinforced composite. *Materials Today: Proceedings*. 2022 Aug, 72, 2082-2088, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.08.144>. (SCOPUS indexed)
- Padmakumar A, Madhavan AP, Joseph J, **K Shunmugesh**. Transient Thermal Analysis on Rotary Friction Welding of 15CDV6 Aerospace Steel. *Transactions of the Indian Institute of Metals* 2023 Mar, 76(3), 799-808, ISSN 0972-2815, <https://doi.org/10.1007/s12666-022-02759-3>. (SCI indexed)
- **Vinoj .K** Presented a paper "Fabrication of Metal Surface Composite by Friction Stir Processing" in International conference on Intelligence System and Control organized by Karpagam college of Engineering, Coimbatore
- **Vinoj K** , Jayakrishnan B , Cyril M Syriac , Joseph Markose "Design and Fabrication of Earth Tube Heat Exchanger" *International Journal of Advances in Engineering and Management (IJAEM)* Volume 5, Issue 5 May 2023, pp: 975-982 www.ijaem.net ISSN: 2395-5252
- **Vinoj K** , John Pulickakudiyil , Joyal C Benny , Nandaraj P S "Development and Fabrication of Glove Donning System" *International Journal of Advances in Engineering and Management (IJAEM)* Volume 5, Issue 6 June 2023, pp: 245-252 www.ijaem.net ISSN: 2395-5252

FACULTY TRAINING

- Dr. Arun Raphel participated in One week FDP on Emerging Trends in Additive Manufacturing from 30-01-2023 to 03- 02-2023 at FISAT, Angamaly.
- Nidheesh K participated in One week FDP on Emerging Trends in Additive Manufacturing from 30-01-2023 to 03- 02-2023 at FISAT, Angamaly.

STUDENTS AWARDS AND ACHIEVEMENTS

- Athul Anto Jolly of S2 ME has participated in the event AUTOCAD Drawing competition and achieved Second price conducted during Tech Fest BODHI conducted by VJCET Vazhakulam.
- Sudhi Paul, Ajith Vinoy, Thejus Boby of S4 ME, achieved First price in Bike Engine Assembly competition conducted during Tech Fest BODHI conducted by VJCET Vazhakulam.
- Amai S Thampi, and Alan Vincent of S4 ME, achieved Second price in Bike Engine Assembly competition conducted during Tech Fest BODHI conducted by VJCET Vazhakulam.
- Vinayak Rajmohan and Jishnu Baiju of S4 ME achieved First price in Group Dance competition conducted during Tech Fest BODHI conducted by VJCET Vazhakulam.

OUTSTANDING ACHIEVEMENTS BY STUDENTS

- Jol Jais , Emmanuel Lejoy, Bibin S, Ashik Ashok of S4 ME developed a working model of Bluetooth Connected Remote controlled Car.



- Delton Joy, Habel Baby, Fenuel Reji of S4 ME conducted Bike Engine Assembly competition and Bike engine workshop during Technical Fest BODHI, conducted by VJCET Vazhakulam, About 72 candidates attended the workshop and 4 teams participated in the competition. Price awards were also distributed to the winners.

TRAININGS AND INTERNSHIPS ATTENDED BY STUDENTS



Editorial Board

Editorial Board: Mr. Martin Jose, Assistant Professor