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ENGINEERING COLLEGE
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DEPARTMENT OF MECHANICAL ENGINEERING

MONTHLY NEWS – APRIL 2023

About Department of Mechanical Engineering

The department offers UG program in B.E Mechanical engineering from the year 2005. The department started a PG program M.E Industrial Safety Engineering from this academic year 2018-2019. This course has wide range of job opportunity in the Industrial and Academic sector of India as well as abroad. The Department aims at providing the students with a perfect blend of intellectual and practical experiences with the support state-of-the-art laboratories and well-defined academic structure. The UG program is accredited by National Board of Accreditation (NBA). The special feature of the Department has established three applied laboratories, in addition to the regular labs to support students to master skills to make each one industry-ready, with a solid grounding in the principles and practice of Mechanical Engineering. We also have a strong academy for training students to appear for GATE exam.

Vision of the Department

To produce competent Mechanical Engineers of excellent technical and managerial skills with profound morality for global, national and confront societal development.

Mission of the Department

1. To provide quality education in Mechanical Engineering with an interdisciplinary approach, encouraging innovation, research, and Entrepreneurship through world-class infrastructure and proficient teachers.
2. To make the department self-reliant through multiple programs with excellent curricula, best practices, and industry exposure.
3. To inculcate technical, professional, and leadership skills, moral ethics, and lifelong learning.

Programme Educational Outcomes

The Bachelor of Mechanical Engineering curriculum is designed to impart Knowledge, Skill, and Attitude to the graduates to

PEO 1: Have a successful professional career in Mechanical Engineering and allied industries, either by employment or through entrepreneurship.

PEO 2: Establish competency in Design, Thermal, Materials, and Manufacturing system with ethics and social responsibility.

PEO 3: Have a continual receptiveness for leadership and social challenges.

Message from the Head of the Department

**Dear Colleagues,
Greetings!**

I have great pleasure and pride to announce that the Department of Mechanical Engineering is publishing the newsletter for the month of April 2023. Amidst the Covid Pandemic situation, we strived hard to keep the students engaged, and utilize the time not only for quality education and for self-development. We are steadfast in our progress as it involved various activities that enabled the hidden talents of the department students and faculty members to be brought into light. Besides the lockdown, our faculty members are continuously attending various training programs, publishing research papers, book chapters and are also working on getting patents.

This newsletter is the reflection of department activities which showcases all the events held in the department, contribution of faculty members, students and the best practices adopted. I would like to congratulate all the members of the editorial board for their sincere effort to realize this venture.



Dr. R. Samuel Hansen, M.E., Ph.D.

Professor & Head

samuel_hansen@rediffmail.com

EDITORIAL BOARD

Dr. Dr. R. Samuel Hansen, Professor & Head of Department, Editor – in – Chief.

Dr. S. Balakrishnan, Assistant Professor, Mechanical Department, Faculty In charge.

SYMPOSIUM

The 18th National Level Technical Symposium MEGNAZ 2023 was conducted on 11.04.2023. The chief guest for the event Er. Radha Shankar, Assistant Manager, Renault Nissan Research and Development center Chennai. The Staff Co-ordinator Dr.R.K.A.Bhalaji gave the welcome address. The programme was felicitated by the principal Dr.V.Velmurugan and the Head of the Department Dr.R.Samuel Hansen. Mr.T.Abraham Jebamani Raj the secretary of association gave introduction to chief guest and he delivered inspiring speech. Er. Radha Shankar motivated the students about how to prepare for the interview with attractive resume. Additionally, he shared the industrial experience with our students. Four technical and Four Non-Technical events were conducted. Around 90 students from various colleges in Tamil Nadu participated in the event and the prize winners were honoured during the valedictory function. The gathering came to an end with a thank note by Mr.T. Manikanda Prabu, the joint secretary of the association.



GUEST LECTURE

The Department of Mechanical Engineering conducted the SAE Awareness program with the topic “Self-Driving Car” on

26.04.2023. The chief guest for the event Mr.S.Shanmugam, Founder Director, Design Desk India Private Limited. The Staff Co-Ordinator Dr.R.K.A.Bhalaji gave the welcome address. The programme was felicitated by Head of the Department Dr.R.Samuel Hansen, Professor/Mech. First of all Resource person discussed about how to use self-driving car software and its benefits. He revealed about what are the elements in the software such as planning, control, perception & localization. In addition to this, he said self-driving software is made using the concepts of artificial intelligence and machine learning. Finally, he told how to identify the objects and signals in the road using high-definition map. Around 60 students from the Department of Mechanical Engineering participated in the event. The gathering came to an end by a thank note by Mr.T. Esakki Selvam, Second Year Student, Department of Mechanical Engineering.



FACULTY DEVELOPMENT PROGRAM

The Department of Mechanical Engineering conducted the Faculty Development Programme with the topic “Expert Talk on Lean Audit: A New Consultancy Avenue” on 27.04.2023. The programme was felicitated by Head of the Department Dr. R.Samuel Hansen, Professor/Mech. First of all Resource person

discussed about the concepts of lean manufacturing for the purpose of minimizing waste within manufacturing system. Regarding this, he revealed the Japanese term “Kanban”. It was developed by Toyota to improve manufacturing efficiency and also he shared the principles of kanban with real time examples. After that he deliberated the idea about line balancing concepts, methods and how to achieve. With regards to line balancing, the resource person conducted the practical session with faculty members for clearly understand the concepts. Finally, he showed the Toyota 3M model such as Muda, Mura & Muri and its benefits. Around 10 faculty members from FXEC and 2 faculty members from SMTEC are benefited from this programme.

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Vannargudi, Tirunelveli - 627 003.

Faculty Development Programme

TOPIC: **Expert Talk on Lean Audit: A New Consultancy Avenue**

Dr. M. Kannan
Professor,
Mechanical Engineering,
Francis Xavier Engineering College.

RESOURCE PERSON

Organized by
Department of
Mechanical Engineering

Co-ordinator
Dr. R.K.A. Bhalaji
Assistant Professor / MECH

Convener
Dr. R. Samuel Hansen
HoD / MECH

27th
APRIL, 2023
12.00 PM to 3.00 PM

Patrons
Dr. M. Mohamed Sathik
Director - School of Computer Studies
Dr. K. Jeyakumar
General Manager - Development
Dr. V. Velmurugan
Principal



INDUSTRIAL VISIT

A batch of 67 Second year students and two faculty members from the Department of Mechanical Engineering, Francis Xavier Engineering College visited the “Tirunelveli District Co-operative Milk Producers Union Ltd, Reddiarpatty Road, Tirunelveli on the 18th of April, 2023.

Milk is procured from the Village level societies twice a day. The milk cost payment is made on the basis of quality test which consists of Fat and Solids not fat content. The union milk Procurement wing consists of both procurement and Animal Health Coverage. The procurement activity of the union is

collecting milk from 480 societies. Through 23 milk collection-routes in both Tirunelveli and Thoothukudi district.

The group on reaching the plant was taken on a plant tour by a team. The tour started from the milk weighing and testing unit and all the systems and subsystems like the steam heater and milk separator cooling systems, packing system, cooling tower unit with huge pumps, refrigerator unit and oil-fired boiler were viewed. The team was given permission to visit the calibration unit where the operating parameters and the progress of the processes are monitored. The visit filled a helpful and interested mindset to the student and staff team.

Organizing Committee: Dr.K.Vinukumar, AP/Mech and Mr. S.Rakesh, AP/Mech



INDUSTRIAL VISIT

A batch of 30 students and a member of faculty from the Department of Mechanical Engineering, Francis Xavier Engineering college visited the “Thumba Equatorial Rocket Launching Station” TERLS - VSSC Thumba, Trivandrum on the 19th of April, 2023. The TERLS was established in the year 1963. The

VSSC museum that is built in a church displayed many scales down models of rockets and satellite space crafts and information on those models were elaborated by a steering team. The team has got a chance to meet one of the Deputy project managers who is instrumental in the launch of the SSLV rocket that was launched on the 11th of February. He delineated the scope for Mechanical Engineering students in the Aerospace industry. The visit has infused a positive and curious mindset in the team. On the top of that, the view of the scenic Arambadi pass (one of the major passes that connects Kerala and Tamil Nadu, also called as Aralvaimozhi pass) with all the water, greenery and mountains was jaw dropping. DR. ZEENATHUL FARIDA ABDUL GANI, Professor coordinator for this IV.