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# DEPARTMENT OF MECHANICAL ENGINEERING MONTHLY NEWS – JUNE 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.

Edited & Designed by Dr. S. Balakrishnan, AP/Mech, FXEC

#### **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 June 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.

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An "Industrial visit to Keltron Communication Complex, Thiruvananthapuram" was organized by Department of Mechanical Engineering on 26th June, 2023 at 09:00 am to 04.00 pm. Mr.R.Rahesh and Mr.S.M.Sunder Rajan Assistant Professor – Department of Mechanical Engineering made all the arrangements for the industrial visit to Keltron Communication Complex, Thiruvananthapuram.

A batch of 40 First year students from the Department of Mechanical Engineering, Francis Xavier Engineering College visited the "Keltron Communication Complex, (Kerala State Electronics Development Corporation Ltd.) Thiruvananthapuram on 26th June, 2023. Firstly they showed the video presentation about history of Keltron Communication Complex, A government undertaking company and what are all the products manufactured, distributed in and around Kerala. They specify their clients like ISRO-VSSC and their sub units located nearby region and the application of products. Initially the students were split into two groups and Technical Expert Mrs.K.Revathy., and her team explained the manufacturing and overall working of the Traffic Signals and Systems Kelton Communication Complex.



### **INSTITUTE INDUSTRY INTERACTION**

In the view of Department of Mechanical Engineering student internship and placement benefit faculty Mr. S.Sheik Sulaiman & Samuel, AP/MECH, have J.Jeremy Jeba Mr. visited six manufacturing facilities in Chennai on 26.06.2023 & 27.06.22023. During their visit, they have interacted with plant manager, HR & Admin, other key persons about our college Autonomy facility, skill training, freedom on syllabi framing, student internship while study (specifically during seventh & eight semester study) and placement requirements for direct job recruitment procedures. They have visited the following companies YANMAR Engine Manufacturing India Private Limited (Japanese based company), Origins by Mahindra World city, Ponneri Taluk, DOOSAN Bobcat India Pvt.Ltd (Korean based company), Polyhose India Pvt.Ltd, Gummudipoondi Taluk, Tiruvallur Dist, Tube Products of India (A unit of Murugappa group), Avadi, AGS Health, Prince Info city, Kandanchavadi, & Vestas wind Technologies (Denmark based company),Old Mahabalipuram Road, Sholinganallur.

The Outcome of the visit, In Yanmar, the company will recruit students having Japanese language skills with NS-3 Certification. In Doosan Bobcat, based on requirements, they will take students as Graduate Engineer Trainees. In Polyhose, they are willing to take students on internships and placements. In Tube Products of India, may arrange few B.E mechanical students for internship. Vestas, may recruit students through an official website career link by one or two years experience.



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### **GUEST TALK**

A "Start-up Ecosystem: An Awareness" was organized by Entrepreneurship Development Cell & Institution's Innovation Council in association with the Department of Mechanical Engineering on 09th June 2023 at 01:30 pm to 04.30 pm. The program was held via offline mode. Dr.R.K.A.Bhalaji, AP/Mech inaugurated the session with a welcome address.

Firstly, resource person discussed about what is start-up, why start-ups India & key points of start-up India scheme. He said that start-up India initiative aims to fill gaps in the economy for the & development of start-ups and boost growth digital entrepreneurship at the grassroots. He envisioned the aim of the initiative to transform India into a start-up nation, 'A country of job creators instead of job seekers. Next, he revealed the major elements of startups ecosystem such as support organizations, big companies, funding organizations, universities, service provider, research organizations etc. Resources person showed the graphical figure related to start-up India, overview of performance of states, global ranking of Indian startups and, he shared the idea about how to face the challenges in start-ups. Next big question facing startups is funding, he told better ways for funding to develop the start-up in an effective manner. Next, he said nowadays startups that are changing the face of virtual reality in India. Additionally, he revealed successful start-up founder in India such as Bhavish Aggarwal (Ola), Vijay Shekhar Sharma (Paytm), Deepinder Goyal (Zomato) etc and mentioned about top funded startups in India of all time. Finally, he concluded the session with the quote 'The success of the young entrepreneur will be the key to India's transformation to the new millennium' and said startup India is a flagship initiative of Indian government, intended to build a strong eco-system for nurturing innovation & startups in the country that will drive sustainable economic growth and generate large scale employment opportunities.



## **GUEST TALK**

A "Workshop on Lean Start-up & Minimum Viable Product" was organized by Entrepreneurship Development Cell & Institution's Innovation Council in association with the Department of Mechanical Engineering on 28th June 2023 at 09:30 pm to 04.30 pm. The program was held via offline mode. Dr.R.K.A.Bhalaji, AP/Mech inaugurated the session with a welcome address.

**Forenoon Session**, First of all resource person (Mr.S.David Blesssley) discussed about what is lean start-up, key principles of lean start-up such as entrepreneurs are everywhere, entrepreneurship is management, validating is learning, build, measure, learn and innovative accounting and its benefits. Next resource person said that lean start-up focuses on reducing waste, validating assumptions, and building products or services that customers want and it was developed by Eric Ries.

**Afternoon Session**, Initially resource person (Dr.R.K.A.Bhalaji) said that minimum viable product (MVP) is the essential version of the final product that we plan to work on. It has the minimum features that allow it to be launched in the market and collect feedback from users. Next, he talked about why we need MVP for the purpose of improving productivity, save money, improve customer service & network more efficiently and discussed about the benefits of MVP such as easy to use, mobile responsive, scalable & customizable.



