



FRANCIS XAVIER[™]
ENGINEERING COLLEGE
AN AUTONOMOUS INSTITUTION

Accredited BY NBA | AICTE Sponsored Margdarshan Mentor Institution
DST-FIST Supported Institution | ISO 9001:2015 Certified
Recognized under Section 2(f) & 12(B) of the UGC Act, 1950

[f /fxengg](#) [t /fxengg](#) [i /fx_ec](#) [in /fxengg](#)
[y /francisxavierengineeringcollege](#)

DEPARTMENT OF MECHANICAL ENGINEERING

MONTHLY NEWS – MARCH 2022

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 curriculum, best practices, and industry exposure.
3. To inculcate technical, professional, leadership skills, moral ethics, and lifelong learning.

Programme Educational Outcomes

Bachelor of Mechanical Engineering curriculum is designed to impart Knowledge, Skill, and Attitude on 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 March 2022. Amidst the Covid Pandemic situation, we strived hard to keep the students engaged, and utilize the time not only for quality education and also 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. I. Neethi Manickam, M.E., Ph.D.
Professor & Head
neethimanickam@francisxavier.ac.in

EDITORIAL BOARD

Dr. I. Neethi Manickam, Professor & Head of Department, Editor – in – Chief.

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

CLASS COMMITTEE MEETING I

On April 1, 2022, the Department of Mechanical Engineering held the first-class committee meeting for the IV year Mech A section in Classroom ME104. Mr. M. Subash M, the AP/Mech meeting chairperson, and Dr. S. Balakrishnan, the AP/Mech Faculty Adviser for this section. The meeting will start at 11:15 a.m. Dr. S. Balakrishnan spoke about the significance of meetings. After that session, Mr. M Subash took over and asked students about the subject and their needs. Students requested that permission be granted for the symposium to take place at this meeting, and they were also asked to provide mark sheets for the third, fourth, and fifth semesters.



WORKSHOP

A “Workshop on “Design Thinking: A Tool for New Product Development” was organized by Entrepreneurship Development Cell & Institution’s Innovation Council in association with the Department of Mechanical Engineering on 12 & 13th April, 2022 at 11:00 to 4.00 pm. The program was held via offline mode. Dr. R.K.A.Bhalaji, AP/MECH coordinated the programme. Mr.

S.Kathiresan, Senior Mechanical Designer & Mr.M.Lakshmanan, Junior Mechanical Designer, CADD Centre, Tirunelveli was the resource person. The resource person highlighted what are the steps to develop the new innovative product with real time examples. Additionally they explained about how to design the new innovative product in a recent trends using CATIA, CREO & Solid Works software's. As well as they revealed about what are the innovative products expected by people in a modern society.



FRANCIS KAVIER ENGINEERING COLLEGE AN AUTONOMOUS INSTITUTION ACCREDITED BY NBA Vannarpettai, Tirunelveli - 627003		
Design Thinking: A Tool for New Product Development		
	Mr. S. Kathiresan Mechanical Designer, CADD Centre, Vannarpettai, Tirunelveli	Mr. M. Lakshmanan Mechanical Designer, CADD Centre, Vannarpettai, Tirunelveli
Resource Persons		
Organized by Entrepreneurship Development Cell & Institution's Innovation Council		In association with Department of Mechanical Engineering
Coordinator Dr. R.K.A. Bhalaji <small>AP / Mech</small>	Convenors Dr. I. Neethi Manickam <small>HOD / Mech</small>	
Dr. P. Lourdes Poobala Rayen <small>Director EDC & iC President</small>	Dr. K. Jeyakumar <small>General Manager - Development</small>	Dr. V. Velmurugan <small>Principal</small>

WORKSHOP

A “Workshop on “Orienting Budding Engineers on Innovative Product Development” was organized by Entrepreneurship Development Cell & Institution’s Innovation Council in association with the Department of Mechanical Engineering on 21st April, 2022 at 11:00 to 12.30 pm. The program was held via offline mode. Dr.I.Neethi Manickam, HOD/Mech inaugurated the workshop with welcome address. Mr. Jegan, Technical Executive, iTechacademy, Tirunelveli was the resource person. The resource person shared about new tools to develop the innovative product using CREO software. In addition to this, he explained regarding what are the new products expected by the industries as per recent trends. As well as he motivated the students to create the new products for the people in a pandemic situation.

FRANCIS XAVIER ENGINEERING COLLEGE
AN AUTONOMOUS INSTITUTION | ACCREDITED BY NBA
Vannarpettal, Tirunelveli - 627003.

Topic ▶▶▶ **Orienting Budding Engineers on Innovative Product Development** **21 APRIL 2022**

Organized by **Entrepreneurship Development Cell (EDC)** In Association with **Department of Mechanical Engineering**

Co-ordinator **Dr. R.K.A. Bhalaji** AP / Mech
Convenor **Dr. I. Neethi Manickam** HOD / Mech

Resource Person **Mr. Jegan** Technical Executive, iTechacademy

Dr. Lourdes Peepala Rayen EDC Director & IIC President
Dr. K. Jeyakumar General Manager - Development
Dr. V. Velmurugan Principal



MANUSCRIPT PUBLICATION

Dr. R.K.A. Bhalaji, AP/Mech has published a paper on 01.04.2022. Entitled "Analysis of factors affecting sustainable performance in construction sites using fuzzy AHP-WASPAS methods" at Materials Today: Proceedings (Scopus).

Contents lists available at ScienceDirect

Materials Today: Proceedings

journal homepage: www.elsevier.com/locate/matpr




Analysis of factors affecting sustainable performance in construction sites using fuzzy AHP-WASPAS methods

S. Bathrinath ^{a,*}, S. Mohan ^a, K. Koppiahraj ^a, R.K.A. Bhalaji ^b, B. Santhi ^c

^a Department of Mechanical Engineering, Kakasalingam Academy of Research and Education, Krishnankovil 626126, India

^b Department of Mechanical Engineering, Francis Xavier Engineering College, Tirunelveli, Tamil Nadu 627003, India

^c Department of Mechanical Engineering, National Institute of Technology Goa, Farmagudi, Ponda, Goa 403401, India

ARTICLE INFO

Article history:
Available online xxx

Keywords:
Sustainability
Environment
Method
Construction

ABSTRACT

Sustainability is having our own needs without adjusting any problem related activities. Mainly we need three factors to find the sustainable related problems in working area. We need to identify the best alternative method to find the problem in day to day work activities. Sustainable construction was only practice of creating a best alternative way to solve the problems. The environment and working area major problems was to be identified in the construction site by using above fuzzy AHP method. The modern world sustainable is the best solution for solving construction and industry related problems easily. Our main motive is to reduce environment related problems and to reduce that sustainability is the best way to find suitable solutions for this problem. By using MCDM method and we have to find 18 alternatives and 5 criteria for Job safety analysis (JSA) and Failure mode effective analysis (FMEA). Analytical Hierarchical Process and WASPAS method is used to find the rank the problems and to solve in construction site.
Copyright © 2022 Elsevier Ltd. All rights reserved.
Selection and peer-review under responsibility of the scientific committee of the International Conference on Materials, Processing & Characterization.

INDUSTRIAL VISITS

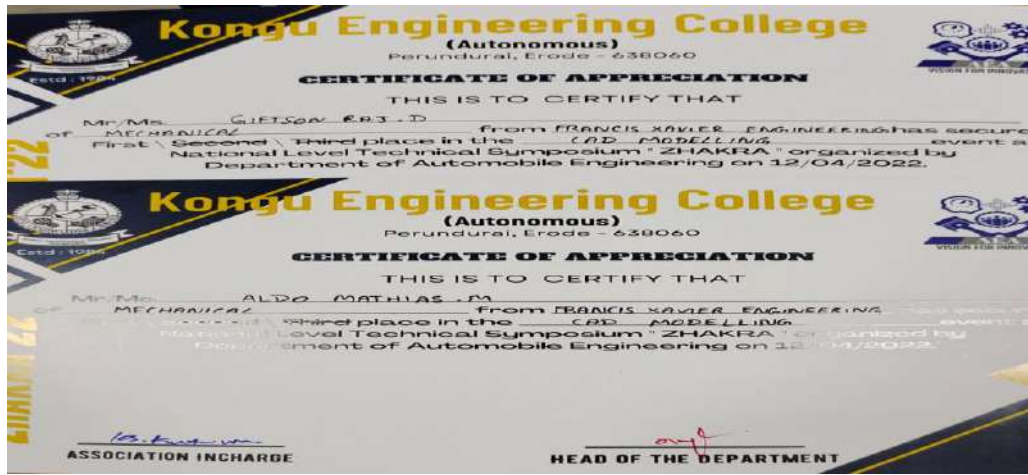
On April 29, 2022, the Mechanical Engineering Department organised an industry visit for first-year mechanical engineering

students at Dalmia Wind Farm Private Limited in Muppandal, Kanyakumari. A total of 44 students participated in the visit. Students studied about wind turbine construction (Control panel, Power panel, Reactive panel, Blade Profile, Breaking System, and Nozzle), energy generation and transmission processes, gear boxes, and generator units during this visit. In addition they got a practical exposure on demounting of wind blades from the tower with the use of cranes and wire rope. Furthermore, SCADA applications for controlling the entire functioning of a wind turbine are also explained to them. Student interacted with team manager and team leader and clarified their doubts. Mr.M.Saravana Kumar and Mr.J.Jeremy Jeba Samuel Assistant Professor, arranged for this field visit.



APPLIED LAB – MECH

The Department of Mechanical Engineering “Design and Analysis” Applied Lab Students III year Mech A sec - Mr. D. Giftson raj, Mr. M. Aldo Mathias and Mr. A. Immanuel, Won the First prize, Third prize and cash award in CAD Modelling and Fixing Auto parts event in the National Level technical Symposium at Kongu Engineering College, Perundurai, Erode on 12 April 2022. Dr. M. Kannan, Professor/ Mechanical is Coordinator of this applied lab.



FACULTY INITIATIVE SKILL TRAINING

The Department of Mechanical Engineering conducted skill training about “Basics of First Aid & How to give CPR” from 06.04.2022 to 25.04.2022. Dr.R.K.A.Bhalaji AP/Mech coordinated the programme. Around 96 students from various departments and 20 students benefited from this programme. He underlined how to give CPR in a practical manner and also highlighted how to give first aid for severe cases with CPR kit.



ESTABLISHMENT OF NEW APPLIED LABS

On 14.4.2022, the Department of Mechanical Engineering has set

up two new applied labs. The first is the Manufacturing and Fabrication Applied Lab, which offers hands-on training in the production of environmentally friendly products. This lab is led by Prof. J. Jeremy Jeba Samuel, Assistant Professor of Mechanical Engineering. The second goal of the HACKATHON Applied Lab is to provide students with a platform to solve some of the most pressing problems we face in our daily lives, instilling a culture of product innovation and a problem-solving mindset. This lab is supervised by Prof. M. Ayyanar Raja, Associate Professor of Mechanical Engineering.

SKILL TRAINING - AUTOCAD

The department of Mechanical Engineering organized a Mandatory Skill Training on "AUTOCAD" on behalf of FXEC's Training and Skill Development (TSD) programme for the benefit of first year mechanical engineering students from 29.3.2022 to 13.4.2022. The skill trainers were Mr.S.Thanumalaya Perumal, Mr. K.Robinston Jeyasingh Swikker. A total of 67 students benefited from this program with venue at CAD Lab. The hands-on training begins with an overview of design software and AutoCAD applications in industry. Skill trainers evaluated students' performance based on the completion of the test project.

