



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

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DEPARTMENT OF MECHANICAL ENGINEERING MONTHLY NEWS – MAY 2025

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 in announcing that the Department of Mechanical Engineering is publishing the newsletter for the month of May 2025. 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 to light, Our faculty members are continuously attending various training programs, publishing research papers, and book chapters, and are also working on getting patents.

This newsletter is the reflection of department activities that showcase all the events held in the department, the contributions of faculty members, and 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
samuelhansen@francisxavier.ac.in



GUEST LECTURE

Mechanical Engineering in the Era of Industry 4.0

FX Alumni Association organized a guest lecture in association with department of Mechanical Engineering for the Second year Mechanical students. Er.G.Pradeep Singh., Admin., Awfis Space Solutions Ltd., Chennai delivered the guest lecture on “Mechanical Engineering in the Era of Industry 4.0” On 05-05-2025. A heartfelt greeting to the resource person is extended by Dr. R. Samuel Hansen, HOD-MECH. The expert resource thanked the management for offering him this opportunity.

The speaker began by explaining the origin and principles of the fourth industrial revolution, commonly referred to as Industry 4.0. Emphasis was placed on key enabling technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), Cyber-Physical Systems, Big Data Analytics, and Cloud Computing. The audience learned how these technologies are being applied in mechanical engineering to enhance manufacturing efficiency, quality control, and real-time monitoring. The concept of smart factories and the shift from traditional automation to intelligent systems were discussed with examples from leading global industries.

One of the highlights of the lecture was the discussion on interdisciplinary collaboration, where mechanical engineers must now work closely with experts in electronics, software, and data science. The speaker illustrated this point through case studies on predictive maintenance using sensors and analytics, as well as digital twin technologies used in advanced product design and testing.

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Alumni Event

05th MAY 2025
Topic: **Mechanical Engineering in the Era of Industry 4.0**
11:00 AM to 12:00 PM

Organised by **FX Alumni Association**
in Association with **Department of Mechanical Engineering**

Er. G. Pradeep Singh
Admin., Awfis Space Solutions Ltd.
Chennai

Co-ordinator
Mr. S.M. Sunder Rajan
Assistant Professor
Dept. of Mechanical Engineering

Convener
Dr. R. Samuel Hansen
HOD
Dept. of Mechanical Engineering

Mr. S. Krishnakumar
Director, FXAA

Dr. A. George Klinton
General Manager (D)

Dr. V. Velmurugan
Principal, FXEC

Washington Accord INTERNATIONAL ENGINEERING ALLIANCE
NBA NATIONAL BOARD ACCREDITATION
The Highest Star Status by the MOE, Govt. of India for Innovation and Entrepreneurship Activities



The session concluded with an engaging question-and-answer segment, where students asked about career paths, skill development, and project ideas related to Industry 4.0. The speaker also advised on online resources and certifications to help students explore further. Overall, the lecture was highly informative and inspiring, offering participants a clear view of how mechanical engineering is being redefined by digital innovation. The department extended heartfelt thanks to the speaker for bridging the gap between academic learning and industry expectations.

Innovation and Intellectual Property Rights in Engineering

FX Alumni Association organized a guest lecture in association with department of Mechanical Engineering for the Third year Mechanical students. Er.S.Muthu Kumar., Sourcing Executive., Blue Infotech Solutions., Coimbatore delivered the guest lecture on “Innovation and Intellectual Property Rights in Engineering” On 12-05-2025. A heartfelt greeting to the resource person is extended by Dr. R. Samuel Hansen, HOD-MECH. The expert resource thanked the management for offering him this opportunity.

The speaker began by defining innovation in the context of engineering and explained how it drives progress in technology and industry. Real-life examples from mechanical, electrical, and software engineering were discussed to show how innovative ideas can lead to impactful solutions. The importance of design thinking, research, and collaboration in developing novel products and processes was emphasized throughout the session.

A significant part of the lecture focused on the different forms of Intellectual Property Rights, including patents, copyrights, trademarks, and trade secrets. The speaker explained the process of filing for patents and highlighted the legal and ethical considerations engineers must keep in mind when working on new inventions. Participants also learned about the global frameworks governing IPR and the consequences of IP infringement.

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nif RANKINGS 2023
51-100 B A N D

Alumni Event

12th MAY 2025
Topic: **Innovation and Intellectual Property Rights in Engineering**
02:00 PM to 03:00 PM

Organised by **FX Alumni Association**
in Association with **Department of Mechanical Engineering**

Er. S. Muthu Kumar,
Sourcing Executive,
Blue Infotech Solutions., Coimbatore

Co-ordinator: **Mr. S.M. Sunder Rajan**
Assistant Professor
Dept. of Mechanical Engineering

Convenor: **Dr. R. Samuel Hansen**
HOD
Dept. of Mechanical Engineering

Mr. S. Krishnakumar Director, FXAA
Dr. A. George Klington General Manager (D)
Dr. V. Velmurugan Principal, FXEC

Washington Accord INTERNATIONAL ENGINEERING ALLIANCE
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The lecture concluded with a Q&A session, where students clarified their doubts about patenting procedures and the role of IPR in startups. Overall, the session was highly informative and inspired participants to consider innovation not just as a technical activity but as a strategic process that requires protection and planning. The lecture successfully underscored the importance of integrating innovation and IPR knowledge into the engineering curriculum.

INDUSTRIAL VISIT

The Department of Mechanical Engineering has organized an Industrial Visit to Family Plastics Pvt Ltd. Gangaikondan, Tirunelveli for II Year Mechanical Engineering Students. 55 students accompanied by two faculty members accompanied the visit. Family Plastics Pvt Ltd is a well-established manufacturer specializing in plastic injection moulding and various plastic products. The company is known for its commitment to quality and innovation in plastic manufacturing. It operates from Sipcot Industrial Centre, Gangaikondan, Tirunelveli, Tamil Nadu 62735. The visit began with a briefing by the company representative Mr.Thomas, Supervisor who provided an overview of the company's history, products, and manufacturing techniques. Students were introduced to the importance of plastic molding in various industries. The team observed the plastic injection moulding process, where raw plastic materials are melted and injected into moulds to create different products. The use of automated machinery for precision and efficiency was demonstrated. The company emphasized its quality control measures, ensuring defect-free products. Industry professionals explained the challenges and advancements in plastic manufacturing. Students had the opportunity to ask questions about sustainability practices in plastic production. The Coordinators Mr.J.Jeremy Jeba Samuel and Mr.S.David Blessley have organized the visit. This visit provides useful insight towards the subject Engineering Materials and Metallurgy.



BOARD OF STUDIES MEETING

The 13th Board of Studies meeting of Department of Mechanical Engineering was conducted on 30.05.2025 at 11.00 a.m at our college Presentation Hall and all our Mechanical Engineering Department Staffs were participated.

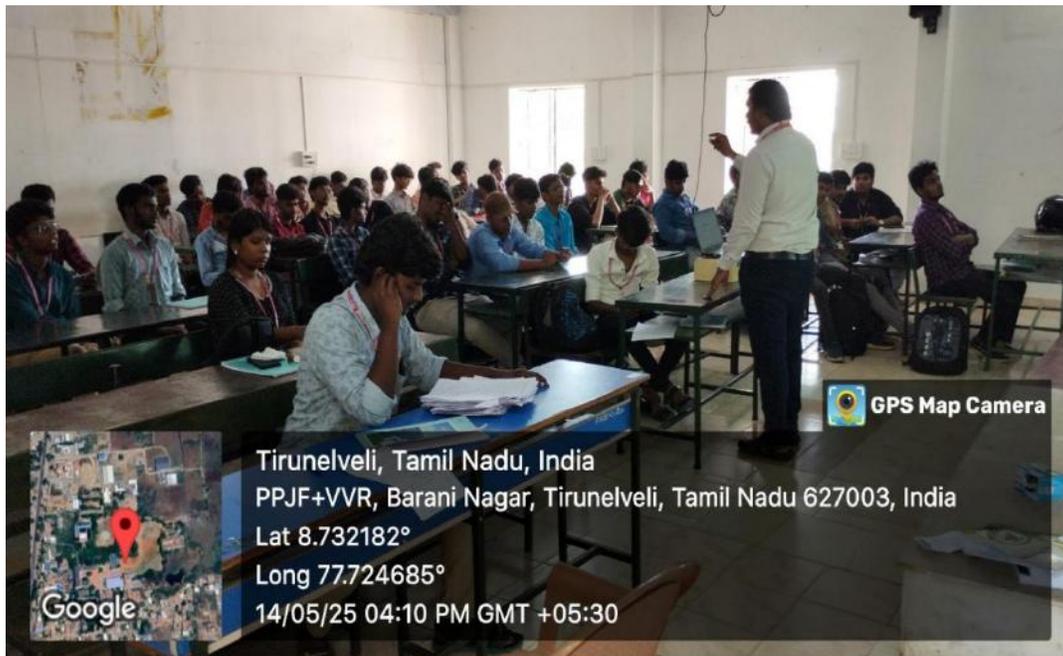


ENTREPRENEURSHIP & STARTUP

Startup Opportunities through Affiliate Marketing

On 14.05.2025 a session was organized on the title “**Startup Opportunities through Affiliate Marketing**” by the Entrepreneurship Development Cell and Institution Innovation Cell in association with Mechanical Engineering department. The session was handled by **Dr. K. Vinukumar, Assistant professor, Francis Xavier Engineering College. 59 First year Mechanical Engineering students and 2 faculties** participated in the program. This event was coordinated by Mr. J. Jeremy Jeba Samuel, Assistant Professor, Department of Mechanical Engineering, Francis Xavier Engineering College.

Affiliate marketing is a viable startup opportunity for those seeking low-barrier entry, scalability, and passive income potential, with success dependent on niche selection, content creation, and audience engagement. Platforms like Extrape and Earn.pe can further enhance affiliate marketers' reach and income.





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CERTIFICATE OF PARTICIPATION

This is to certify that **ANDREWS JEROVIN A** of I year **Mechanical Engineering** has actively participated in the Discussion on “**Startup Opportunities through Affiliate Marketing**” presented by **Dr.K.Vinukumar, AP/Mech**. The Session was Organized by EDC cell of Council of **Francis Xavier Engineering College** Mechanical Engineering Department in association with Institution’s Innovation, Tirunelveli, Tamilnadu on 14.05.2025.

Coordinators

Dr.K.Vinukumar

Asst. Professor/ Mech

Dr.R.Samuel Hansen

HOD / Mech

Dr. Lourdes Poobala Rayen

Director, EDC
President, IIC

Dr. V. Velmurugan

Principal

NPTEL CERTIFICATION

Our department continues to achieve remarkable milestones in academics and training. A total of six students from the 2nd year have successfully completed the NPTEL course on Product Design and Manufacturing, strengthening their knowledge in modern design principles and production methods. Additionally, one 3rd year student has completed the same NPTEL course, showcasing the continuity of learning across different levels. Furthermore, one 2nd year student has successfully completed the NPTEL course on Computer Integrated Manufacturing, enhancing their understanding of advanced automation and integration in the manufacturing process. These achievements reflect the commitment of our students to skill development and innovation in the field of mechanical engineering.



NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
BASEERUDEEN S
for successfully completing the course
Computer Integrated Manufacturing
with a consolidated score of **52 %**

Online Assignments	21.56/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **1302**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2025
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

Roll No: NPTEL25ME11S1058800610 To verify the certificate

No. of credits recommended: 3 or 4



Elite
NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
MUTHU SELVAN M
for successfully completing the course
Product Design and Manufacturing
with a consolidated score of **75 %**

Online Assignments	22.81/25	Proctored Exam	52.04/75
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Total number of candidates certified in this course: **3569**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2025
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

Roll No: NPTEL25ME67S1256800625 To verify the certificate

No. of credits recommended: 3 or 4

PAPER PUBLICATION

We are proud to announce that Mr. Sangilinathukumar J, faculty of the Department of Mechanical Engineering, has been invited to serve as a Reviewer for research papers at the International Conference on Innovative Developments in Advanced Materials, Manufacturing and Industry 4.0 (INDAM 2025), organized in association with IOP Publishing.



Sangilimuthukumar .J <sangili112140@gmail.com>

You have a Paper to review

1 message

Morressier Team <discover@morressier.com>
To: sangili112140@gmail.com

15 May 2025 at 19:10

IOP Publishing

Dear Sangilimuthukumar J,

Thank you for choosing to review papers for International Conference on Sustainable Development in Advanced Materials, Manufacturing and Industry 4.0 (INDAM 2025).

You have been assigned papers and can begin reviewing them immediately. The deadline to submit your reviews is June 10, 2025.

Please be aware that the organizers may assign you additional papers for review.

Please contact the conference organizer for questions regarding:

- deadline extension
- abstract/paper assignments
- certificates

Please contact support@morressier.com or use the [Get help](#) option in your personal menu if you need any assistance using the platform.

Check your Reviewer Dashboard for an overview of your assigned Papers.

PRODUCT DEVELOPMENT

Innovation and Product Development Applied Laboratory

Final year Mechanical Engineering Innovation Applied Lab students have been got approval in TNSCST - Student project scheme for getting fund Rs.7500.



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE CAMPUS, Chennai- 600 025
Student Project Scheme (2024-25) – Approved List

S.No	Name of the Guide & Institution	Project Title	Student(s) Name	Code	Amount (Rs.)
Agricultural Sciences					
939.	Dr.S. Sheik Sulaiman, AP/Mechanical Engineering Francis Xavier Engineering College, Vannarpettai, Tirunelveli - 627 003	Design and development of grain/paddy threshing machine	Nithish Kumar. JI, Kiruba Selva Kumar. M, Balakumaran. M, Mohammed Abdul Rahim. J	EME- 126	7500