

# MIECHONS'25

**2025 Edition**



**Annual Magazine  
Department of  
Mechanical Engineering**

## **VISION OF THE DEPARTMENT**

To produce mechanical engineering graduates with high standards, and making them as committed professionals with ethical values

## **MISSION OF THE DEPARTMENT**

**DM1:** To impart quality technical education and to compete successfully in today's Industrial requirements.

**DM2:** To develop the professional potential that leads to pursue research and higher studies.

**DM3:** To improve and sustain the professional behaviour and ethical values.

## **Program Educational Objectives – PEOs**

PEO I: Graduates shall excel in the field of design, thermal, materials and manufacturing, as

successful engineers or researchers or as entrepreneurs.

PEO II: Graduates will analyze problems, design solutions and develop products as a team

member in advanced industrial projects.

PEO III: Graduates shall have professional ethics, team spirit, life-long learning, good oral and

written communication skills and adopt corporate culture, core values and leadership skills.

## **Program Specific Outcomes – PSOs**

PSO1: Professional skills: Students shall understand, analyze, design and develop integrated equipment, thermal devices and composite components manufacturing.

PSO2: Competency: Students shall qualify at the State, National and International level competitive examination for employment, higher studies and research.

## **Program Outcomes - POs**

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.


PO2: Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.



PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**c** **o** **n** **f** **e** **n** **t**

**CHAIRMAN MESSAGE**

**CORRESPONDANTMESSAGE**

**HOD MESSAGE**

**ABOUT THE DEPARTMENT**

**FACULTY STRENGTH**

**DEPARTMENT ACTIVITY**

**COURSES**

**STUDENTS ACHIEVEMENTS**

**STAFF ACHIEVEMENTS**

**ARTS**

**PHOTOGRAPHY**

# CHAIRMAN MESSAGE



## **Wishes From the Founder**

Dear Friends,

DMI and MMI are Congregations of Catholic Religious Sisters and Priests known for their service to humanity in many parts of the world.

Self respect through Self sustenance, Self sustenance through Capacity building, Capacity building through knowledge based technical skills, knowledge based technical skill towards respectable employment, and respectable employment towards the realization of one's ability to market one's own ideas, skills and products is our vision for those whom we serve.

To groom well disciplined, humanly motivated, intellectually enlightened, technically oriented citizens with stamina built in to face the changing world and a committed and strong spiritual base is our goal.

All our educational and developmental services are oriented towards this goal which is to be achieved through the collective effort of consecrated Religious, committed collaborators, dedicated staff, receptive students and all others concerned.

We pray and hope that every person who passes through our hands is nourished and enriched in every way, not only to face the future but also to shape his or her own future and that of our country and the universe.

**May God bless you!**

**Rev. Fr. Dr. J. E. Arul Raj**  
Founder and Chairman



# CORRESPONDANT MESSAGE



Greetings !

DMICE is a warm and welcoming learning community, committed to creating the best possible educational experience for every Student. We aim to enable all students to reach their full potential.

We have a talented, dedicated, caring team of staff, each of whom works very hard to ensure that the abilities of the Students in our care are nurtured and carefully developed. Our Faculty and teaching assistants are experienced, and work as a team to make the College a very special place, every day, for your child.

At DMICE we aim to provide a broad, well balanced and relevant curriculum. We encourage positive social behavior, emphasizing respect for others. We believe that every Student has the right to work in a calm, orderly, safe and secure environment. We value every student and have the highest possible expectations in the areas of achievement and behavior. DMICE provides a stimulating and enriched environment so that the students can enjoy all aspects of their learning. We value regular contact with parents/ guardians, and regard the home- school partnership as an essential part of the education process. We are always looking for new ways to involve parents in the life of the school and to keep them informed of the things we are doing.

Wishing you all the very best .....

**Rev.Sr.M.K. TERESA, M.A., M.Phil.,**  
Coresspondent,  
DMICE.



## HOD MESSAGE



**Dear Readers,**

It gives me immense pleasure to pen a few words for *MECHONS*, the official Magazine of the Department of Mechanical Engineering. This platform reflects the vibrant academic and co-curricular culture of our department and showcases the remarkable achievements of our students and faculty.

Mechanical Engineering, being one of the oldest and most versatile branches of engineering, continues to evolve with the rapid advancements in technology. From traditional core sectors to cutting-edge innovations in robotics, additive manufacturing, renewable energy, and AI-integrated systems, our department is committed to nurturing engineers who are not only technically sound but also ethically grounded and socially responsible.

Over the past months, our students and faculty have demonstrated excellence through research publications, participation in national-level competitions, industrial collaborations, and community outreach. Their dedication and hard work make us proud and reaffirm our mission of fostering holistic development.

I congratulate the editorial team of *MEVOLUTION* for their efforts in bringing out this edition. I encourage all readers to actively engage with the newsletter, contribute their ideas, and stay connected with the ever-evolving world of Mechanical Engineering.

Let us continue to innovate, inspire, and transform the future—together.

Warm regards,

**Dr. A Amala Mithin Minther Singh**  
**M.E., MBA., Ph.D.**

Head of the Department  
Mechanical Engineering

## **ABOUT THE DEPARTMENT**

The Department of Mechanical Engineering is established as a full-fledged department offering B.E course from the year 2009 with an intake of 60 and in the year 2012 intake has been increased to 120 and from 2014 onwards the intake is 180 students. The Department has excellent infrastructure facilities in keeping with latest trends and requirements and well reputed faculty members. It aims at preparing the students to face the challenge of the materially-conscious and technologically fast-developing world. It means to transform the students into young engineers with sound technical knowledge, leadership skills and decision-making abilities. This preparation results from the discipline and commitment of the students, leadership of the management and distinction of the faculty. The Department periodically conducts Guest lectures, Industrial visits, Symposiums, Seminars etc. through its parent body “Association of Radiant Mechanical Youngsters (ARMY)” for the benefit of students. The efforts of our committed faculty members are really towards producing the students with excellence in knowledge and character. The department periodically organizes conferences, FDPs, workshops, hands-on training and value added courses in coordination with AICTE, ISTE, Anna University, SAE, TEDA and reputed industries etc., for the benefit of both the academic and industrial community. The department has recently installed 3D Printing Facility which is a recent technology in manufacturing. Ours is one among few colleges which is having such a facility. Industrial visits and internships are arranged every year for the benefit of our students in some of the following industries.

- 
- Mitsubishi heavy Industries Ltd, Ranipet.
  - Hinduja Foundries
  - Chennai Fort Trust
  - North Chennai Power Plant
  - Delphi TVS
  - Rane TRW
  - Brakes India and etc.

Our Students are placed in reputed industries every year through on and off campus placement drives, some of the core companies are,

- Hero Motors
- Mercury fittings
- SMR Industry
- Veltech Industries
- Indian Navy
- Boston India Pvt Ltd
- Avalon Technologies
- Petrofac
- Maruti Suzuki
- L&T
- Hyundai and etc.

# Faculty Strength

Sl. No	Name of the Faculty	Designation
<b>Teaching Faculty</b>		
1	Dr. A. Amala Mithin, HOD/MECH	Professor and Head
2	Dr. V.N. Anbazhagan	Associate Professor
3	Dr. G. Tamil Kumaran	Assistant Professor
4	Mr. Rajamahendran S	Assistant Professor
5	Mr. S.O. Kaniraj	Assistant Professor
6	Mr. M. Senthil Kumaran	Assistant Professor
7	Mr. N. Krishnamoorthy	Assistant Professor
8	Mr. P. Saravanan	Assistant Professor
9	Mr. E.M. Pradeep	Assistant Professor
<b>Non-Teaching Faculty</b>		
1	Mr. Ramamoorthy	Technical Assistant
2	Mr. Baskar	Technical Assistant

# DEPARTMENT ACTIVITY

## Independence Day Celebrations

**DMI COLLEGE OF ENGINEERING**  
(AN AUTONOMOUS INSTITUTION)  
APPROVED BY AICTE, AFFILIATED TO ANNA UNIVERSITY, NSA ACCREDITED PROGRAMMES,  
ISO CERTIFIED INSTITUTION

Department of Mechanical Engineering  
Organizes  
**Independence Day Celebration**  
16/08/2024



**EVENTS**

- Drawing- Theme: Independence Day
- Elocution- Patriotism ( Both Tamil & English)
- Essay writing- Patriots in India(Both Tamil & English)
- Poster design- Independence Day
- Best Quotes Framing
- Quiz Competition

**Coordinators**  
Mr. G. Tamilkumaran AP/Mech  
Ms. M. Senthilkumaran AP/Mech

Rev. Sr. M. K Teresa  
Correspondent

Dr. Sujatha Jamuna Anand  
Principal

Dr. A. Amala Mithin  
HOD/Mech



The Department of Mechanical Engineering at DMI College of Engineering organized the **Independence Day Celebration** on **16th August 2024** with great enthusiasm and patriotic spirit. The event aimed to honor the nation's freedom and inspire students to understand the values of unity, sacrifice, and patriotism.

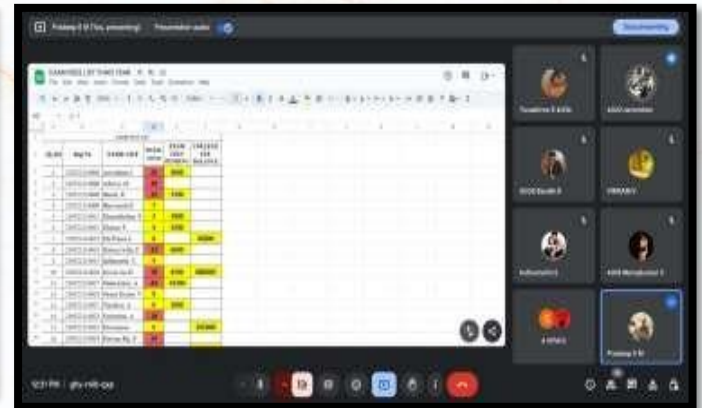
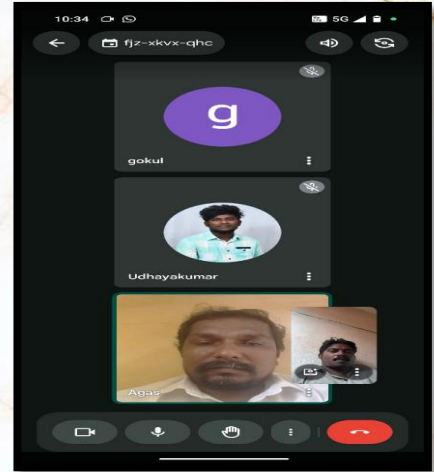
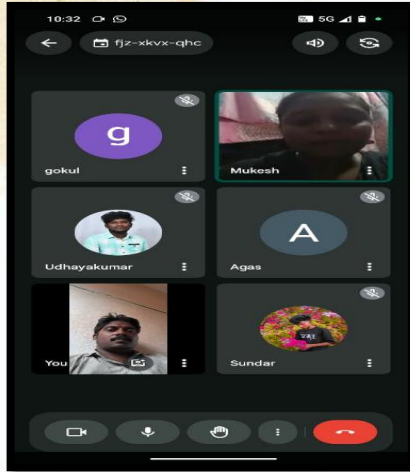
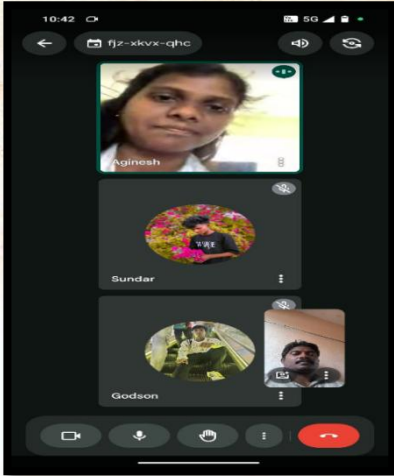
A variety of activities were conducted to engage students and provide a platform to showcase their talents. The **Drawing Competition** focused on the theme of Independence Day, encouraging students to express their creativity through art. The **Elocution Contest**, held in both Tamil and English, allowed participants to deliver inspiring speeches on patriotism and the role of freedom in shaping the nation. In addition, an **Essay Writing Competition** was organized in both Tamil and English on the topic of patriots in India, highlighting the contributions of national leaders and freedom fighters.

To further enhance the celebration, a **Poster Design Contest** on the Independence Day theme was conducted, showcasing students' innovative ideas through visual presentations. The **Best Quotes Framing Competition** encouraged participants to craft meaningful and motivational quotes, while the **Quiz Competition** tested their knowledge of history, freedom struggle, and India's achievements.

The event was coordinated by **Mr. G. Tamilkumaran** and **Mr. M. Senthilkumar**, Assistant Professors of the Mechanical Engineering Department. It was graced with the guidance and support of **Rev. Sr. M. K. Teresa (Correspondent)**, **Dr. Sujatha Jamuna Anand (Principal)**, and **Dr. A. Amala Mithin (Head of the Department, Mechanical Engineering)**.

The celebration successfully instilled patriotic values among students, fostering unity, creativity, and pride in the nation's heritage.

# Virtual Parent-Teachers Meeting Report



A **Virtual Parent-Teachers Meeting** was conducted for the **2nd, 3rd, and 4th-year students** with the aim of strengthening communication between faculty and parents while ensuring the academic and personal progress of students. The meeting began with a **welcome address** and an introduction of faculty members, acknowledging their role in guiding students' development. The session primarily focused on reviewing **academic performance** through recent assessments and assignments. Faculty members highlighted both achievements and areas requiring improvement, while individual progress was discussed in detail. **Attendance** was also reviewed, with emphasis on how irregularity negatively impacts learning outcomes. Parents were encouraged to motivate their wards to maintain consistent attendance. In terms of examination preparedness, it was informed that **Model Exams** would commence from **16th November for final-year students** and **18th November for 2nd and 3rd years**. Faculty urged parents to ensure students devote sufficient time for revision, as model exams help in identifying weak areas ahead of finals. The **arrear list** of students was also explained, along with remedial measures such as extra mentoring sessions to help students clear backlogs. Additionally, reminders regarding **pending fee payments** were given, stressing the importance of clearing dues to avoid academic disruptions. The meeting concluded with an **open forum**, where parents actively engaged, sharing feedback and raising queries related to academics, career prospects, and financial matters. Overall, the meeting highlighted time management, parental involvement, and stress reduction strategies as essential for students' holistic growth, ensuring a collaborative effort between faculty and parents.

# Recent Trends in Metal Joints

**DMI COLLEGE OF ENGINEERING**  
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 PALANCHURU, CHENNAI - 600123

**DEPARTMENT OF MECHANICAL ENGINEERING**

**ORGANIZES WEBINAR ON**

## RECENT TRENDS IN METAL JOINTS

**Date:** 13-11-24 **Time:** 6:00 PM

**RESOURCE PERSON**

**Dr.K.Giridharan**  
 Assistant Professor  
 Easwari Engineering College  
 Chennai

**Rev.Sr.M.K.TERESA** CORRESPONDENT  
**Dr.SUJATHAJAMUNA ANAND** PRINCIPAL  
**Dr.A.AMALA MITHIN** HOD/MECH  
**Dr.V.N.ANBZHAGAN** Coordinator

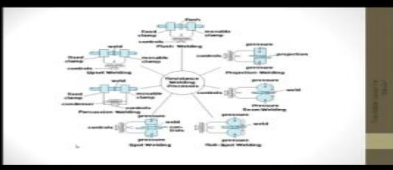
**Introduction**

- Joining processes in which two or more pieces of parts are joined together to produce a single product of required shape and size.
- The joining process can be classified as
  - Permanent joining processes**
    - It is done by fusing the metal together. The metal is brought to its molten state and then it is fused to become one. Welding, soldering and brazing.
  - Softs - permanent or temporary joining processes**
    - In this the metal is not heated. Process is carried out at room temperature. Mechanically joining process can be done using nuts, bolts, screws and adhesives.

Dr.K.Giridharan is presenting

Participants: Dr.K.Gird..., gokul, Godson, You, blithishku..., SR10 others

**Dr.K.Giridharan is presenting**



Participants: Dr.K.Girid..., Godson, gokul, You, blithishku..., S : 11 others

**Difference between Soldering and Brazing**

Sr no	Soldering	Brazing
1	Melting point of the filler material is about 600 degree.	Melting point of the filler material is below 450 degree.
2	Dissimilar metals can be joined easily.	Only similar metals can be joined.
3	Good surface finish.	Does not yield a good surface finish.
4	Stronger joints.	Less stronger joint.
5	It is used for production of heat exchangers and radiators.	It is used for electrical and electronic applications.

Dr.K.Giridharan is presenting

Participants: Dr.K.G..., Dr.V.N..., gokul, ..., blithis..., SR11 others

The **Department of Mechanical Engineering** at **DMI College of Engineering** organized a highly informative **webinar on “Recent Trends in Metal Joints”** on **13th November 2024 at 6:00 PM**. The session aimed to provide students and faculty with updated knowledge about advancements in metal joining processes, which are critical in various fields of engineering and manufacturing.

The resource person for the webinar was **Dr. K. Giridharan, Assistant Professor, Easwari Engineering College, Chennai**, who brought in-depth expertise and practical insights into the subject. During the session, he elaborated on the **importance of metal joints** in industries such as automotive, aerospace, marine, and construction, highlighting how modern developments are shaping efficiency, durability, and sustainability in manufacturing.

The discussion covered **traditional joining methods** like welding, riveting, and bolting, and gradually moved toward **emerging techniques** such as friction stir welding, laser welding, adhesive bonding, and hybrid joining processes. Dr. Giridharan emphasized the role of **automation, robotics, and advanced materials** in revolutionizing joint technology. He also shed light on how these innovations are helping industries improve product quality, reduce costs, and meet environmental standards.

The webinar encouraged active participation, with students raising questions about real-world applications, challenges in metal joining, and future opportunities for research. The event was successfully coordinated by **Dr. V. N. Anbazhagan**, with guidance and support from **Rev. Sr. M. K. Teresa (Correspondent)**, **Dr. Sujatha Jamuna Anand (Principal)**, and **Dr. A. Amala Mithin (HOD/Mech)**.

Overall, the session proved to be highly beneficial, enriching participants with valuable knowledge about the evolving trends in metal joints and their significance in modern engineering practices.

# NON-DESTRUCTIVE TESTING (NDT)

**DMI COLLEGE OF ENGINEERING**  
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PALANCHUR, CHENNAI - 600123

DEPARTMENT OF MECHANICAL ENGINEERING

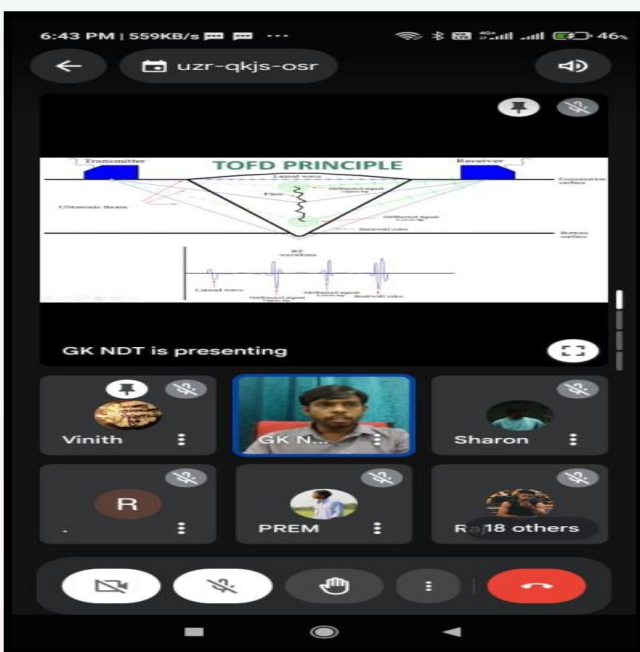
ORGANIZES  
WEBINAR  
ON  
**NON-DESTRUCTIVE TESTING**

RESOURCE PERSON  
**Mr. Raja Guru K**  
Managing Partner  
GK NDT SERVICES  
CHENNAI



Date: 13-11-24 Time: 6:00 PM

Rev. Sr. M.K. TERESA CORRESPONDENT  
Dr. SUJATHA JAMUNA ANAND PRINCIPAL  
Dr. A. AMALA MITHIN HOD/MECH  
Mr. S. RAJAMAHENDRAN Coordinator



The **Department of Mechanical Engineering** at **DMI College of Engineering** organized an insightful webinar on “**Non-Destructive Testing (NDT)**” on **13th November 2024 at 6:00 PM**. The session was aimed at enhancing students’ understanding of modern testing techniques that ensure quality and reliability in engineering components without causing any damage to them. The distinguished **resource person** was **Mr. Raja Guru K, Managing Partner, GK NDT Services, Chennai**, who shared his expertise and industrial experience in the field of NDT. He began the session by explaining the **importance of NDT** in industries such as aerospace, automotive, power generation, oil and gas, and infrastructure, where safety and precision are paramount. The webinar covered a wide range of **NDT methods**, including ultrasonic testing, radiographic testing, magnetic particle inspection, dye penetrant testing, and eddy current testing. Each method was explained with its working principle, applications, and advantages. Special emphasis was given to how these techniques are used in detecting cracks, surface irregularities, and hidden flaws in materials and welded structures. Mr. Raja Guru also highlighted the **latest advancements in NDT**, such as digital radiography and automated inspection systems, which improve accuracy and efficiency. He motivated students to explore **career opportunities** in the NDT sector, as it plays a vital role in ensuring safety, reducing costs, and extending the service life of engineering products. The session was successfully coordinated by **Mr. S. Rajamahendran**, with strong support and guidance from **Rev. Sr. M. K. Teresa (Correspondent)**, **Dr. Sujatha Jamuna Anand (Principal)**, and **Dr. A. Amala Mithin (HOD/Mech)**. Overall, the webinar was highly beneficial, equipping participants with valuable insights into modern testing methods that are essential for quality assurance in engineering industries.

# METROLOGY AND MEASUREMENTS.

**DMI COLLEGE OF ENGINEERING**  
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**DEPARTMENT OF MECHANICAL ENGINEERING**

**ORGANIZES**  
**WEBINAR**  
**ON**

**NOV 15**

**METROLOGY AND MEASUREMENTS**

**RESOURCE PERSON**  
**Dr.P.CHANDRAMOHAN Ph.D**  
**PROFESSOR**  
**Department of Mechatronics Engineering REC CHENNAI**



**Rev.Sr.M.K.TERESA**  
CORRESPONDENT


**Dr.SUJATHA JAMUNA ANAND**  
PRINCIPAL

**Dr.A.AMALA MITHIN**  
HOD/MECH

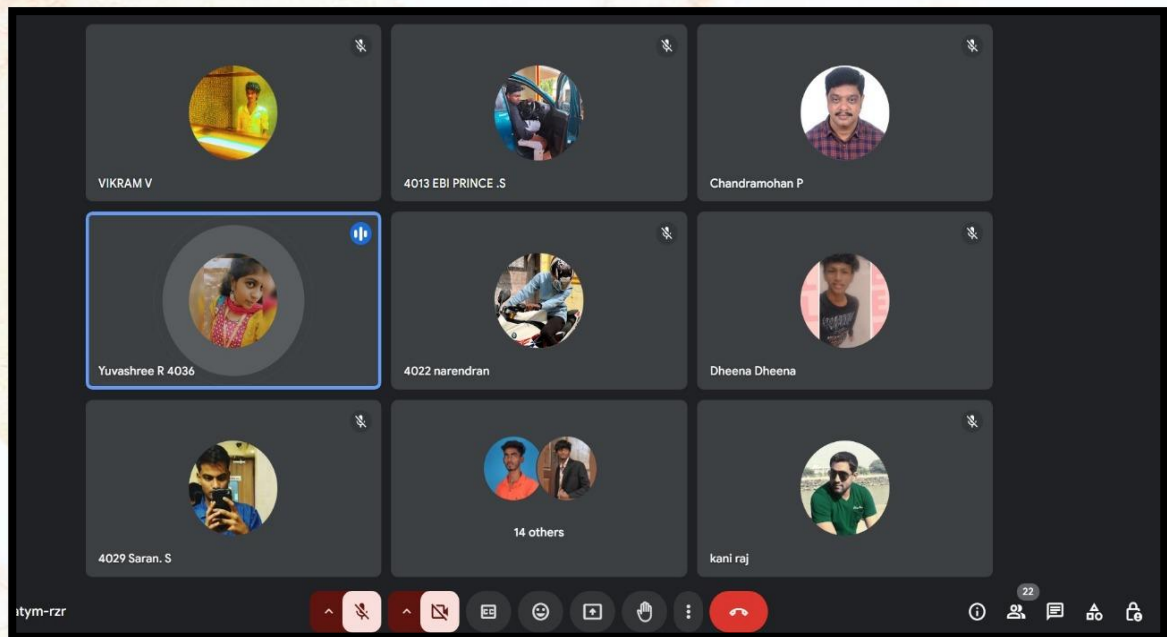
**Mr.KANI RAJ S O**  
Coordinator

## MEASUREMENTS - Introduction

- Measurement is a **process of comparing** inputs with pre-defined standard and giving the output.
- Metrology is a **science** of measurement.
- Metrology is also concerned with the **industrial inspection** and its various techniques.
- For every kind of quantity measured, there must be a **unit** to mea: [https://www.youtube.com/watch?v=...](#)



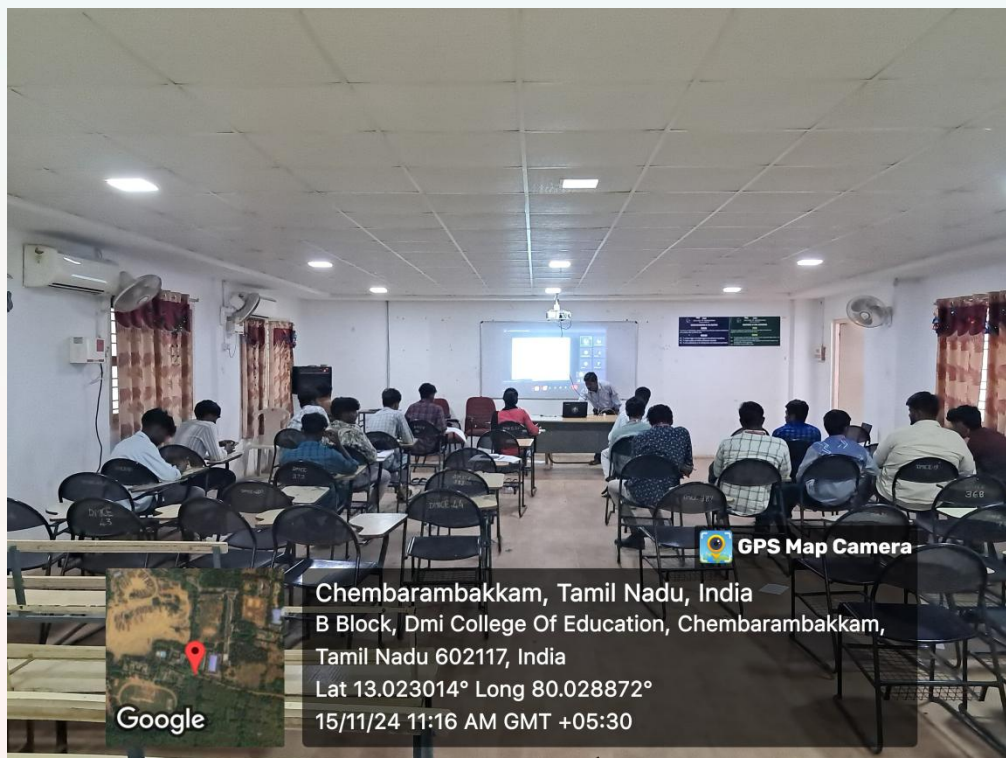
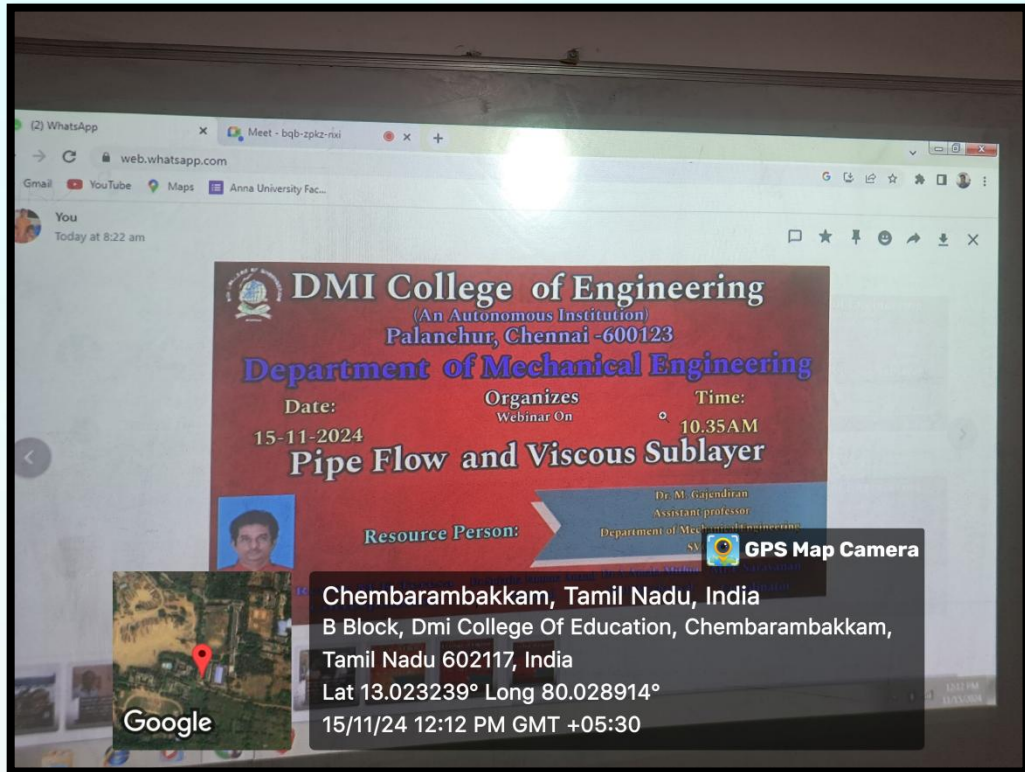
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The Department of Mechanical Engineering at DMI College of Engineering, Chennai, organized a webinar on the specialized topic of Metrology and Measurements. The event featured Dr. P. Chandramohan, Ph.D., a Professor from the Department of Mechatronics Engineering at Rajalakshmi Engineering College (REC), Chennai, as the expert resource person. His academic background suggests the webinar provided high-level, technical insights into the principles and applications of precision measurement, a critical area in mechanical and mechatronics engineering. The webinar was organized under the auspices of the college's leadership, with Rev. Sr. M.K. Teresa (Correspondent), Dr. Sujatha Jamuna Anand (Principal), and Dr. A. Amala Mithin (Head of the Mechanical Engineering Department - MOD/MECH) lending their support. The coordination was managed by Mr. Kanirajso. This event highlights the institution's commitment to enhancing its curriculum by providing students with exposure to current industry-relevant topics and expert knowledge from distinguished academics. Focusing on metrology and measurements would have aimed to deepen students' understanding of quality control, standardization, and the accurate measurement techniques essential for design, manufacturing, and research in engineering fields. Such initiatives are crucial for bridging theoretical knowledge with practical application, ultimately contributing to the development of skilled graduates ready for the engineering industry.

# PIPE FLOW AND VISCOUS SUBLAYER



The Department of Mechanical Engineering at DMI College of Engineering, Chennai, for an event titled "Pipe Flow and Viscous Sublayer." Scheduled for November 15, 2024, at 10:35 AM, the event appears to be a seminar or lecture focused on a fundamental concept in fluid mechanics. The core topic, "Pipe Flow and Viscous Sublayer," pertains to the behavior of fluids moving through enclosed conduits. Pipe flow is a critical area of study in engineering, with applications ranging from water supply systems and oil pipelines to industrial processing. A key aspect of this flow, especially for turbulent conditions, is the formation of a "viscous sublayer." This is an extremely thin layer of fluid immediately adjacent to the pipe wall where viscous forces dominate over inertial forces. Within this sublayer, the velocity of the fluid changes rapidly from zero at the wall (a condition known as the "no-slip" boundary condition) to the velocity of the main turbulent flow. The characteristics of this sublayer are crucial for understanding phenomena like flow resistance, pressure drop, and heat transfer in piping systems. While the flyer mentions a "Resource Person," the name is unclear from the provided text. The inclusion of GPS coordinates and a timestamp suggests the announcement may have been digitally created or shared from the college's location in Chenbambakkam, Tamil Nadu. In essence, this event was organized to provide mechanical engineering students with an in-depth understanding of the internal dynamics of fluid flow in pipes, with a specific emphasis on the critical role played by the viscous sublayer near the pipe walls. Such knowledge is essential for the design, analysis, and optimization of fluid transport systems in various engineering fields.

# ADDITIVE MANUFACTURING

 **DMI COLLEGE OF ENGINEERING**    
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**DEPARTMENT OF MECHANICAL ENGINEERING**  
ORGANIZES  
WEBINAR  
ON  
**ADDITIVE MANUFACTURING  
FUNDAMENTALS AND  
ADVANCEMENTS**

**RESOURCE PERSON**  
**Dr. Mohammed Abbas S**  
**Professor & Head**  
Centre for Innovation & Incubation  
Peri Institute of Technology  
Chennai



**Date**  
16 - 11 - 24

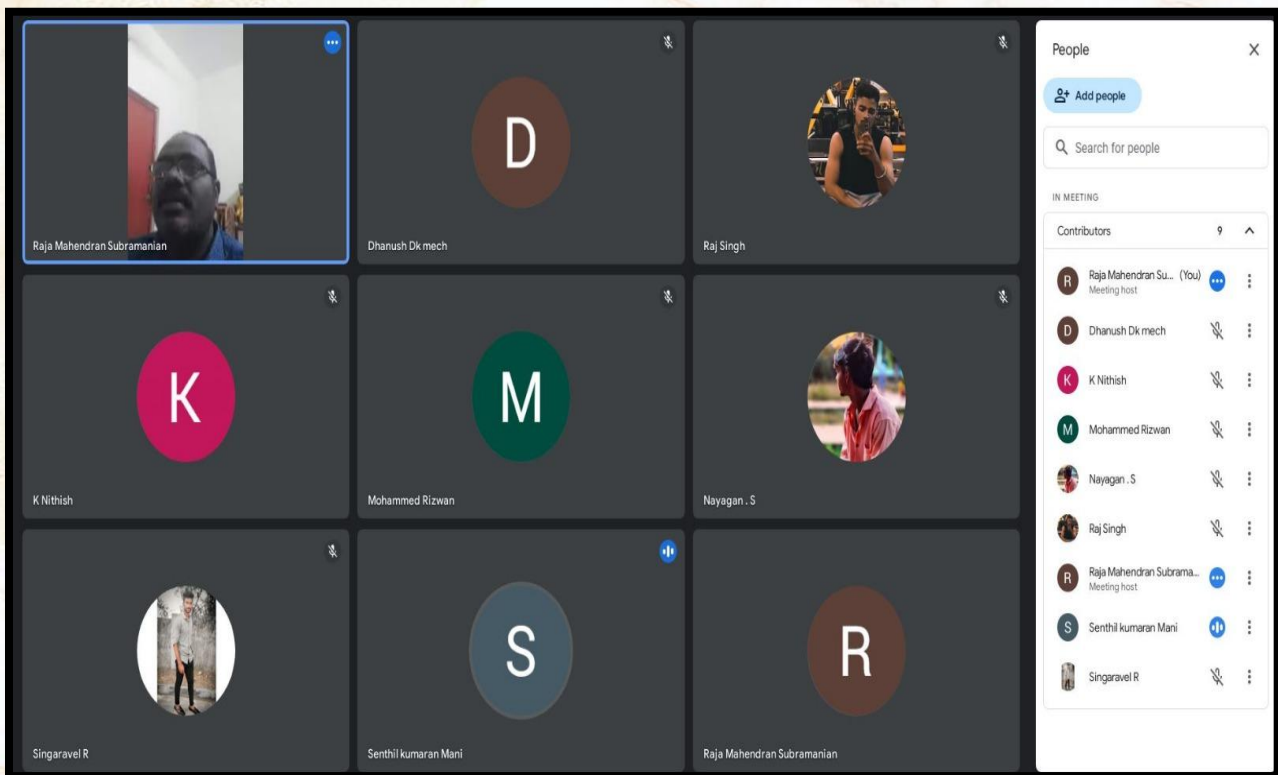
**Time**  
6:30 PM

**Rev. Sr. M. K. TERESA**  
CORRESPONDENT

**Dr. SUJATHA JAMUNA ANAND**  
PRINCIPAL

**Dr. A. AMALAMITHIN**  
HOD/MECH

**Mr. M. SENTHIL KUMARAN**  
Coordinator



The screenshot shows a Zoom meeting interface with a 3x3 grid of participants. The top-left tile shows a video feed of Raja Mahendran Subramanian. The other tiles contain circular profile pictures or initials: Dhanush Dk mech (D), Raj Singh (Raj Singh), K Nithish (K), Mohammed Rizwan (M), Nayagan . S (Nayagan . S), Singaravel R (S), Senthil kumaran Mani (S), and Raja Mahendran Subramanian (R). The 'People' sidebar on the right lists the participants, including Raja Mahendran Subramanian (Meeting host), Dhanush Dk mech, K Nithish, Mohammed Rizwan, Nayagan . S, Raj Singh, Raja Mahendran Subramanian (Meeting host), Senthil kumaran Mani, and Singaravel R.

The Department of Mechanical Engineering at DMI College of Engineering, an AICTE-approved and Anna University-affiliated institution, organized a webinar on the topic of "Additive Manufacturing: Fundamentals and Advancements." The event featured Dr. Mohammed Abbas S, a distinguished expert serving as Professor and Head of the Centre for Innovation & Incubation at Peri Institute of Technology, as the resource person. The webinar's primary focus was on Additive Manufacturing (AM), commonly known as 3D printing, a transformative technology that builds objects layer-by-layer from digital models. The session was structured to cover both the core principles and the latest innovations in the field. The "fundamentals" portion likely provided attendees with an essential understanding of the various AM processes, such as Stereolithography (SLA), Fused Deposition Modeling (FDM), and Selective Laser Sintering (SLS). This foundational knowledge would have included the working principles, the types of materials used (like polymers, resins, and metals), and the basic steps involved in the AM workflow, from CAD design to post-processing. The "advancements" segment of the webinar would have delved into the cutting-edge developments that are expanding the boundaries of this technology. This probably covered topics such as the printing of advanced materials including composites and ceramics, the rise of large-scale additive manufacturing for industries like construction and aerospace, and the integration of technologies like artificial intelligence for process optimization. The discussion likely also explored the growing applications of AM across critical sectors, from creating custom medical implants and prototypes in the automotive industry to on-demand manufacturing of spare parts. By hosting this webinar, the Department of Mechanical Engineering aimed to equip students and faculty with critical insights into a key Industry 4.0 technology. Understanding both the fundamentals and the future trajectory of additive manufacturing is essential for aspiring engineers, as it represents a significant shift from traditional subtractive manufacturing methods, offering unparalleled design freedom, material efficiency, and customization capabilities.

# ADVANCED MATERIALS AND APPLICATIONS



## DMI COLLEGE OF ENGINEERING

(An Autonomous Institution)  
Palanchur, Chennai-600 123.  
*Approved by AICTE, Affiliated to Anna University, ISO Certified Institution, Accredited by NBA*



### Department of Mechanical Engineering

**Organizes**

## Impact of Advanced Materials and Applications



**Resource Person :**  
**Dr. S. Saravanan**  
Professor and Head - Centre for Students Affairs,  
K. Ramakrishnan College of Technology, Trichy.

15/11/2024  
6.30 pm

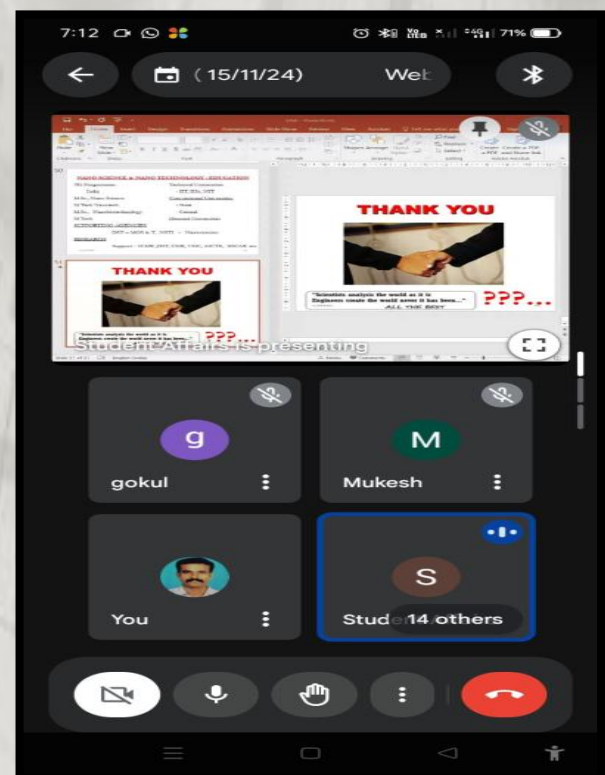
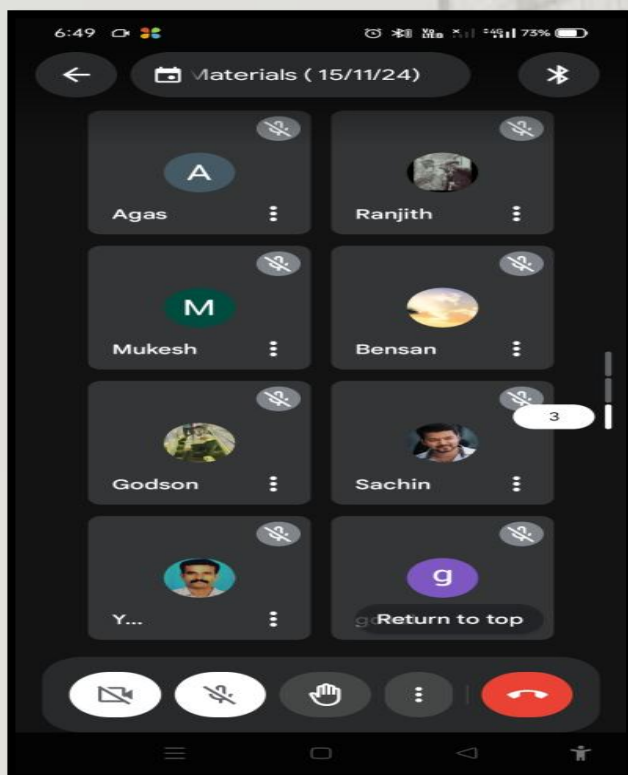
*(Google meet Link: <https://meet.google.com/zkw-vbgf-sjn>)*

Rev. Sr. M.K.Teresa  
Correspondent

Dr. Sujatha Jamuna Anand  
Principal

Dr. A. Amala Mithin  
Head of the Department

Dr. G. Tamil Kumaran  
Co-ordinator



Based on the provided announcement from the Department of Mechanical Engineering at DMI College of Engineering, the event was a session focusing on the "Impact of Advanced Materials and Applications," featuring Dr. S. Saravanan, a Professor and Head of Centre for Students Affairs at K. Ramakrishnan College of Technology, Trichy, as the primary resource person, with Dr. Sujatha Jamuna Anand and Dr. A. Amala Mithin also involved. The seminar aimed to explore the significant role and transformative effects of advanced materials across various engineering fields, highlighting their critical importance in driving modern technological progress. Advanced materials, which include categories such as composites, smart materials, nanomaterials, and high-performance alloys, possess superior properties like enhanced strength, lighter weight, improved thermal resistance, and unique functionalities compared to traditional materials. The discussion likely covered the fundamental characteristics of these materials and delved into their practical applications in key industries, including aerospace, where they contribute to fuel-efficient and durable aircraft components; automotive, for developing lighter and safer vehicles; electronics, enabling smaller, faster, and more efficient devices; and healthcare, for creating advanced biomedical implants and devices. The session also probably addressed the latest research trends, challenges in material synthesis and integration, and the future potential of these materials in fostering innovation and sustainability. By organizing this event, the department intended to provide students and faculty with valuable insights into how advanced materials are shaping the future of engineering, emphasizing the interdisciplinary nature of material science and its pivotal role in solving complex real-world problems, thereby preparing aspiring engineers for the evolving demands of the global industry.

# MECHATRONICS & IOT

**DMI COLLEGE OF ENGINEERING**  
AN AUTONOMOUS INSTITUTION  
APPROVED BY AICTE, AFFILIATED TO ANNA UNIVERSITY  
NBA ACCREDITED PROGRAMMES, ISO CERTIFIED INSTITUTION  
PALANCHUR, CHENNAI - 600123

**DEPARTMENT OF MECHANICAL ENGINEERING ORGANIZES WEBINAR ON**

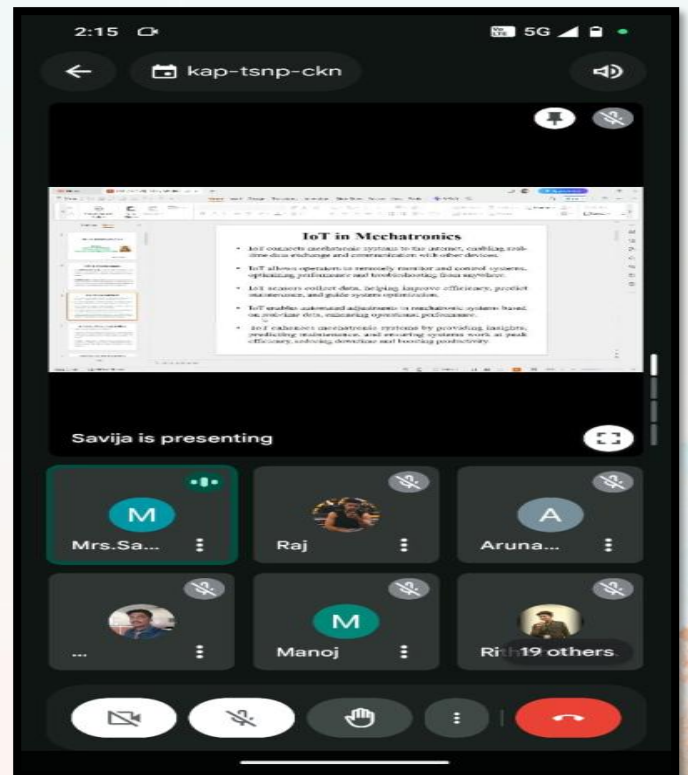
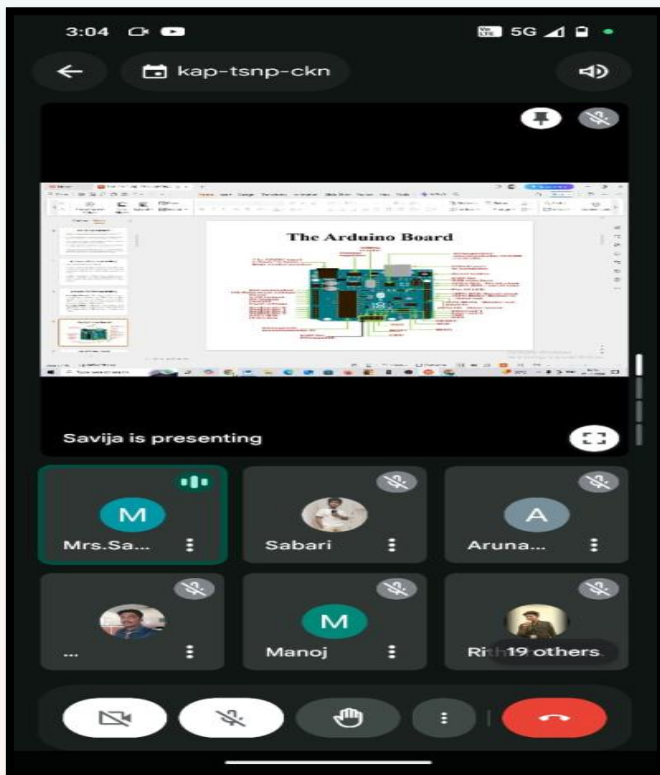
## **MECHATRONICS & IOT**

**RESOURCE PERSON**

**Mrs.SAVIJA J**  
Assistant Professor  
Artificial Intelligence  
and Data Science  
Velammal  
Engineering college  
Chennai

**Date** 16-11-24 **Time** 01:00 PM

**Rev.Sr.M.K.TERESA** CORRESPONDENT  
**Dr.SUJATHA JAMUNA ANAND** PRINCIPAL  
**Dr.A.AMALA MITHIN** HOD/MECH  
**Mr.P SARAVANAN** Coordinator



The Department of Mechanical Engineering at DMI College of Engineering, an AICTE-approved, NBA-accredited institution affiliated with Anna University, organized a webinar on "Mechatronics & IoT" on November 16, 2024. The session, scheduled for 1:00 PM, featured Mrs. Savi Jaj, an Assistant Professor from the Artificial Intelligence and Data Science department of a local engineering college, as the resource person. The webinar aimed to explore the interdisciplinary field of mechatronics—which integrates mechanical engineering, electronics, computer science, and control systems—and its convergence with the Internet of Things (IoT). This integration represents a significant advancement in modern engineering, enabling the development of smart, connected systems capable of autonomous operation and real-time data exchange. The discussion likely covered the fundamental principles of mechatronic systems, such as sensors, actuators, and embedded controllers, and how IoT technologies enhance these systems by providing connectivity, data analytics, and remote monitoring capabilities. Key applications highlighted probably included smart manufacturing (Industry 4.0), autonomous vehicles, robotics, and smart infrastructure, where mechatronics and IoT collaborate to improve efficiency, automation, and functionality. The session also addressed the role of artificial intelligence and data science in optimizing these systems, enabling predictive maintenance, intelligent decision-making, and enhanced performance. By hosting this webinar, the department sought to provide students and faculty with insights into the synergistic relationship between mechatronics and IoT, emphasizing their growing importance in driving technological innovation across various industries. The event underscored the need for mechanical engineers to acquire interdisciplinary skills in electronics, programming, and data analysis to thrive in the evolving landscape of smart technologies, preparing them for future challenges and opportunities in the field.

# INDUSTRIAL VISIT



Based on the location details provided, an industrial visit was organized for students, likely from the Department of Mechanical Engineering or a related discipline, to the SIPCOT Industrial Park in Malayambakkam, Tamil Nadu, on November 13, 2024. The visit to this established industrial estate provided participants with invaluable exposure to real-world manufacturing and engineering operations. Students would have observed the practical application of theoretical concepts learned in the classroom, gaining firsthand insight into modern production lines, quality control processes, and industrial automation systems. The program aimed to bridge the gap between academic knowledge and industry practices by allowing students to witness the scale and complexity of industrial plants, understand workflow management, and learn about safety protocols and efficiency standards maintained in a professional environment. Such visits are crucial for aspiring engineers, as they offer a perspective on the interdisciplinary nature of industrial operations, the integration of technology in manufacturing, and the skills required to thrive in the competitive industrial sector. By interacting with industry professionals, students could also glean insights into career opportunities and emerging trends, thereby enhancing their practical understanding and preparing them for future roles in engineering and technology-driven fields. This experiential learning component is an essential part of the curriculum, designed to complement academic instruction with practical, on-ground experience.

# TECHNICAL SYMPOSIUM



**DMI COLLEGE OF ENGINEERING**  
(AN AUTONOMOUS INSTITUTION)  
(Approved by AICTE | Affiliated to Anna University | NBA Accredited Programmes | ISO Certified Institution)

*with the blessings of  
God our Father  
&  
Best Wishes of our Founder Chairman*

**Very Rev.Fr.Dr.J.E.Arul Raj**  
Founder, DMI & MMI Group of Institutions



*We the DMI Foundations, Principal, Staff Members and Students  
Cordially invite you for the*

**Technical Symposium 2k24**  
*to be held on 25.10.2024 @9.00 a.m.  
Venue: Emmanuel Auditorium, DMICE Campus*

*Chief Guest:*  
**Mr.P.Kalyan Thuth**  
Program Manager - TCS, Chennai  
Story Writer & Short Film Actor



**Dr. Sujatha Jamuna Anand**  
Principal



**Rev.Sr.M.K.Teresa**  
Correspondent



*All are Welcome.....*





# DMI COLLEGE OF ENGINEERING

(AN AUTONOMOUS INSTITUTION)

Approved by AICTE , New Delhi | Accredited by NBA | Affiliated to Anna University , Chennai  
Palanchur Chennai-600123



REG FEE :  
100/-

## DEPARTMENT OF MECHANICAL ENGINEERING

Proudly Organizes

### MEVOLUTION 2K24

ON 25TH OCTOBER 2K24

WON  
Attractive  
Prize

ON SPOT REG AVAILABLE  
All Dept Can Participate

#### TECHNICAL EVENTS

- \* Paper Presentation
- \* CAD Maestro
- \* Tech Quiz
- \* Sheet Metal
- \* Mr.Machinist



Scan to Pay



@mech\_meme

#### NON TECHNICAL EVENTS

- \* Mr.Fitter
- \* E-Sports
- \* Hydro Launch
- \* Hidden gems

Rev.Sr.M.K.Teresa  
Correspondent

Dr.Sujatha Jamuna Anandh  
Principal

Dr.A.Amala Mithin Minther Singh  
HOD

Staff Coordinator :  
Mr.Kani Raj .S.O  
9994291704

Student Coordinator's :  
G.Manojkumaran  
7397371141  
R.Nandha kumar  
6382570534





The Department of Mechanical Engineering at DMI College of Engineering, an autonomous institution approved by AICTE, accredited by NBA, and affiliated with Anna University, Chennai, proudly organized "MEVOLUTION 2K24," a comprehensive technical symposium held on October 25, 2024, at its Palanchur campus. This event, designed to foster technical prowess and innovative thinking, was open to participants from all departments with an on-the-spot registration option available for a nominal fee of ₹100. The symposium featured a diverse array of competitive events that challenged both theoretical knowledge and practical skills, including a Paper Presentation for research dissemination, McFitter for precision fitting tasks, CAD Maestro for computer-aided design expertise, and Hydro Launch for fluid mechanics applications. Additional contests such as Tech Quiz, Sheet Metal forming, Hidden Gems for uncovering innovative ideas, and Mr. Machinist for machining proficiency catered to various facets of mechanical engineering, while E-Sports added a modern recreational element. Under the guidance of correspondents, principals, and faculty coordinators like Dr. Sujatha Jamuna Anandh and Dr. A. Amala Mithin, with student coordinators such as G. Manojkumaran managing operations, the event aimed to bridge academic concepts with industrial applications. By integrating activities that ranged from traditional craftsmanship to digital prototyping and gaming, MEVOLUTION 2K24 provided a platform for holistic skill development, encouraging participants to enhance their technical acumen, creativity, and collaborative spirit in alignment with contemporary engineering demands.

# WORKSHOPS

## *Certificate of Participation*



This is to certify that Mr/Ms/Mrs... **R.YUVASREE**  
has Participated in Workshop on **Product Design & Development**  
at **Diagonal CADD - Porur** on **10/11/24**



**Diagonal CADD™**  
**Pursuit Prowess Design**  
ISO 9001:2015 Certified



No.14, First Floor, Mt.Poonamallee Road, PORUR, Chennai - 116 Ph: 24826076 Mob: 9500126711



A group of students from the Mechanical Engineering Department actively participated in a **Workshop on Product Design and Development** conducted by **Diagonal CADD – Porur, Chennai** on **10th November 2024**. The event aimed at enhancing students' practical knowledge and skills in modern product design techniques, computer-aided design (CAD), and development methodologies. The workshop provided participants with exposure to **cutting-edge design tools**, industrial practices, and the importance of integrating creativity with engineering principles. The session focused on strengthening their technical understanding of product development stages, starting from conceptual design to final prototype analysis. Among the participants, **R. Yuvasree** received a Certificate of Participation for successfully completing the workshop. Along with Yuvasree, **Narendhran, Vishal, Indhumathi, Barath, Deena, Dhanalakshmi, and Aswin** also attended and actively contributed to the program. Their involvement demonstrated teamwork, enthusiasm, and eagerness to learn about advanced CAD applications and product innovation. The training session was particularly valuable as it connected theoretical concepts from their curriculum with **real-world design applications**, preparing them for industry challenges. Students were also introduced to industrial standards and best practices in CAD modeling, simulation, and optimization. Overall, the workshop proved to be an enriching experience for the students. It not only improved their technical proficiency but also inspired them to adopt innovative approaches in their academic projects and future professional careers. The knowledge gained will serve as a stepping stone toward excelling in product design and development fields.

# INDUSTRIAL ENGINEERING & RELIABILITY IN MODERN BUSINESS PRACTICES





# COURSES

## ENTREPRENEURSHIP DEVELOPMENT IN ADDITIVE MANUFACTURING



A significant entrepreneurship development programme was successfully conducted, focusing on the vital area of Programme Language - Python. This event was organized under the auspices of the Ministry of Micro, Small & Medium Enterprises, specifically by the Office of the Development Commissioner (MSME), and implemented through an MSME Technology Centre. The programme was hosted at the CIIO Extension Centre in Chennai, culminating on October 29, 2024. Its primary objective was to equip participants with advanced programming skills in Python, a language critical for modern business innovation, data analysis, and software development, thereby fostering a spirit of entrepreneurship and enhancing technical capabilities among attendees. The curriculum was strategically designed to bridge the gap between theoretical knowledge and practical application, empowering participants to leverage Python for developing scalable business solutions and automating processes. A key indicator of the programme's success and reach was the active involvement of nineteen students. Their engagement provided a dynamic learning environment and underscored the initiative's effectiveness in attracting and nurturing aspiring entrepreneurs and technologists. The event was coordinated under the leadership of the Programme Coordinator, ensuring a structured and impactful learning experience for all involved. Furthermore, the programme enjoyed support from senior figures, including the CEO of the MSME Technology Centre, highlighting the institutional commitment to fostering skill development and entrepreneurial growth. By providing hands-on training in a high-demand programming language, the initiative successfully contributed to building a skilled workforce, aligned with national goals of promoting self-employment and innovation within the micro, small, and medium enterprise sector. The participation of the 19 students stands as a testament to the programme's role in empowering the next generation of entrepreneurs with essential digital tools.

# STUDENTS ACHIEVEMENTS

## RAPID MANUFACTURING

**Elite**

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

This certificate is awarded to  
**MANOJ P**  
for successfully completing the course

**Rapid Manufacturing**

with a consolidated score of **60** %

Online Assignments	22.19/25	Proctored Exam	37.5/75
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Total number of candidates certified in this course: 2026

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Kanpur

Roll No: NPTEL24ME115S856311115    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  
**KARTHIKEYAN K**  
for successfully completing the course

**Rapid Manufacturing**

with a consolidated score of **43** %

Online Assignments	13.44/25	Proctored Exam	30/75
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Total number of candidates certified in this course: 2026

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Kanpur

Roll No: NPTEL24ME115S856311094    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  
**RAJ SINGH**  
for successfully completing the course

**Rapid Manufacturing**

with a consolidated score of **56** %

Online Assignments	16.56/25	Proctored Exam	39/75
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Total number of candidates certified in this course: 2026

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Kanpur

Roll No: NPTEL24ME115S756310996    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  
**DHANUSH I**  
for successfully completing the course

**Rapid Manufacturing**

with a consolidated score of **70** %

Online Assignments	23.13/25	Proctored Exam	46.5/75
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Total number of candidates certified in this course: 2026

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Kanpur

Roll No: NPTEL24ME115S856311101    To verify the certificate    No. of credits recommended: 3 or 4

This document is an official certificate from the NPTEL (National Programme on Technology Enhanced Learning) online platform, an initiative funded by the Ministry of Education, Government of India. It certifies the successful completion of a 12-week course titled "Rapid Manufacturing," administered by the Indian Institute of Technology Kanpur during the July-October 2024 session. The certification details the academic rigor of the course, which culminated in a proctored examination. The recipient's final standing was determined by a consolidated scoring system that combined performance in regular online assignments, which accounted for a portion of the grade, with the results from the final proctored exam. The course is substantial, with a recommendation of 3 to 4 academic credits, reflecting its depth and the effort required to complete it. To provide context for the course's scale and selectivity, it is noted that a total of 2,026 candidates were ultimately certified. However, this figure represents only those who successfully met the completion criteria. The overall enrollment and participation numbers were significantly higher, with records indicating that only six students formally attended and participated in the full course offering. This low attendance figure highlights the challenging nature of the curriculum and the significant commitment required from participants. The certificate bears the signatures of the course coordinator, Prof. S. K. Bhatnagar from the Office of the Dean of Continuing Education at IIT Kanpur, and includes a unique identification number for verification purposes, ensuring its authenticity. This credential serves as a formal recognition of the dedication and proficiency demonstrated in the field of advanced manufacturing technologies.



# PRODUCT DESIGN AND MANUFACTURING

**Elite**

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

This certificate is awarded to  
**MANOJ KUMAR V**  
for successfully completing the course

**Product Design and Manufacturing**

with a consolidated score of **76 %**

Online Assignments	21.88/25	Proctored Exam	54/75
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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: NPTEL25ME67S1159200041 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  
**VIKNESH**  
for successfully completing the course

**Product Design and Manufacturing**

with a consolidated score of **75 %**

Online Assignments	21.25/25	Proctored Exam	53.57/75
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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: NPTEL25ME67S1243301864 To verify the certificate  No. of credits recommended: 3 or 4

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

This certificate is awarded to  
**DHEENA P**  
for successfully completing the course

**Product Design and Manufacturing**

with a consolidated score of **54 %**

Online Assignments	19.69/25	Proctored Exam	34.5/75
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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: NPTEL25ME67S1143310205 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  
**HUDSON SAFIN Y**  
for successfully completing the course

**Product Design and Manufacturing**

with a consolidated score of **63 %**

Online Assignments	22.81/25	Proctored Exam	39.87/75
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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: NPTEL25ME67S1243310745 To verify the certificate  No. of credits recommended: 3 or 4

This official certification commemorates the successful conclusion of the "Product Design and Manufacturing" course, a flagship 12-week program conducted from January to April 2025 under the esteemed National Programme on Technology Enhanced Learning (NPTEL). Funded by the Ministry of Education, Government of India, and administered by the Indian Institute of Technology Kanpur, the course represents a significant initiative in advancing technical education across the country. To earn this certification, participants underwent a rigorous assessment process, which included performance in online assignments, contributing to a segment of the final score, and a comprehensive proctored examination. The culmination of these evaluations resulted in a consolidated score of 75% for this particular candidate, reflecting a strong grasp of the subject matter. The document's authenticity and academic weight are underscored by the signatures of Prof. B. V. Ratish Kumar, Chairman of the Centre for Continuing Education, and Prof. Satyaki Roy, the NPTEL Coordinator at IIT Kanpur. The course, which recommended 3 or 4 academic credits, demonstrated a substantial reach, with a total of 3,569 candidates achieving certification nationwide. Within this broader success story, a dedicated cohort of 19 students successfully navigated the course requirements to attain this credential, highlighting their commitment to mastering the integral principles and practical applications of modern product design and manufacturing processes. This certificate stands as a formal testament to the holder's specialized knowledge and the high standards of engineering education promoted by India's premier institutions.

# ENGINEERING METROLOGY

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

This certificate is awarded to  
**MANOJ KUMAR V**  
for successfully completing the course  
**Engineering Metrology**  
with a consolidated score of **73** %

Online Assignments	23.75/25	Proctored Exam	49.5/75
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Total number of candidates certified in this course: 447


Jul-Oct 2024  
(12 week course)

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

Prof. Satyaki Roy  
NPTEL Coordinator  
IIT Kanpur

Indian Institute of Technology Kanpur

swayam

Roll No: NPTEL24ME99S556314684 To verify the certificate  No. of credits recommended: 3 or 4

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

This certificate is awarded to  
**POOVARASAN S**  
for successfully completing the course  
**Engineering Metrology**  
with a consolidated score of **55** %

Online Assignments	23.13/25	Proctored Exam	31.5/75
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Total number of candidates certified in this course: 447


Jul-Oct 2024  
(12 week course)

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

Prof. Satyaki Roy  
NPTEL Coordinator  
IIT Kanpur

Indian Institute of Technology Kanpur

swayam

Roll No: NPTEL24ME99S556314478 To verify the certificate  No. of credits recommended: 3 or 4

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

This certificate is awarded to  
**HUDSON SAFIN Y**  
for successfully completing the course  
**Engineering Metrology**  
with a consolidated score of **54** %

Online Assignments	20.94/25	Proctored Exam	33/75
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Total number of candidates certified in this course: 447


Jul-Oct 2024  
(12 week course)

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

Prof. Satyaki Roy  
NPTEL Coordinator  
IIT Kanpur

Indian Institute of Technology Kanpur

swayam

Roll No: NPTEL24ME99S556302730 To verify the certificate  No. of credits recommended: 3 or 4

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

This certificate is awarded to  
**NARENDRAN A**  
for successfully completing the course  
**Engineering Metrology**  
with a consolidated score of **55** %

Online Assignments	21.88/25	Proctored Exam	33/75
--------------------	----------	----------------	-------

Total number of candidates certified in this course: 447


Jul-Oct 2024  
(12 week course)

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

Prof. Satyaki Roy  
NPTEL Coordinator  
IIT Kanpur

Indian Institute of Technology Kanpur

swayam

Roll No: NPTEL24ME99S556302924 To verify the certificate  No. of credits recommended: 3 or 4

This official certification acknowledges the successful completion of the "Engineering Metrology" course, a comprehensive 12-week program offered from July to October 2024 under the National Programme on Technology Enhanced Learning (NPTEL). An initiative funded by the Ministry of Education, Government of India, and administered by the prestigious Indian Institute of Technology Kanpur, the course is designed to impart advanced knowledge in the critical field of measurement science, which is fundamental to precision engineering, manufacturing, and quality assurance. The certification was awarded based on a stringent two-tier evaluation process, comprising performance in online assignments and a final proctored examination. The candidate demonstrated a strong grasp of the subject matter, achieving a consolidated score of 73%, which was calculated from an excellent assignment score of 23.75 out of 25 and a proctored exam score of 49.5 out of 75. The document is formally authenticated by the signature of Prof. B.V. Ratish Kumar, Chairman of the Centre for Continuing Education at IIT Kanpur, and includes a unique roll number for official verification, ensuring its legitimacy. The course, which carries a recommendation of 3 or 4 academic credits, attracted a significant number of participants, with a total of 447 candidates ultimately receiving certification across the country. Among this wider body of successful participants, a dedicated group of 6 students successfully fulfilled all the academic and evaluative criteria to earn this distinguished credential. This certificate serves as a formal testament to the holder's specialized expertise in engineering metrology, encompassing principles of measurement, instrumentation, and standards, as validated by one of India's leading technological institutes, thereby signifying a notable accomplishment in their professional or academic development.

# STAFF ACHIEVEMENTS

## AICTE TRAINING AND LEARNING (ATAL) ACADEMY





Faculty members from the Department of Mechanical Engineering actively took part in the **AICTE Training and Learning (ATAL) Academy Faculty Development Program (FDP)** on “*Advanced Functional Materials: Fabrication, Characterization, and Applications.*” The program was organized at **Mepco Schlenk Engineering College, Sivakasi** from **2nd December 2024 to 7th December 2024**. The participants included **Dr. V.N. Anbazhagan, Associate Professor; Mr.M.Senthilkumaran, Assistant Professor; Mr. S. Rajamahendran; Mr. S.O. Kaniraj; Mr. P. Saravanan; and Dr. G. Tamilkumaran.** Their active involvement highlighted the department’s commitment to academic growth and research-oriented learning. The FDP was designed to provide faculty members with comprehensive knowledge of **functional materials and their fabrication processes, advanced characterization techniques, and wide-ranging applications** in various engineering domains. The sessions included lectures, hands-on training, and interactive discussions led by experts from academia and industry. The focus was on bridging theoretical understanding with practical insights, enabling faculty to incorporate advanced material science concepts into teaching and research. Participation in this FDP significantly benefited the faculty members by enhancing their expertise in emerging areas of material science and engineering. It also created opportunities for networking, collaboration, and exploring interdisciplinary applications of functional materials in real-world problems. Overall, the successful completion of this one-week FDP by the faculty members demonstrates their dedication to continuous professional development. The knowledge and skills acquired will undoubtedly enrich classroom teaching, strengthen departmental research activities, and contribute to the academic excellence of the institution.





## Certificate of Participation

This is to certify that Dr. A Amala Mithin Minther Singh

from DMI College of Engineering, Chennai has participated in the course entitled

***"SUSTAINABLE MANUFACTURING TECHNOLOGIES: ADDITIVE, COATING,  
SUBTRACTIVE AND HYBRID"***


during 25-29<sup>th</sup> November 2024

organized by the

**Department of Mechanical Engineering  
National Institute of Technology Warangal**

  
Prof. Bidyadhar Subudhi  
Director, NITW

  
Prof. S Srinivasa Rao  
Local Coordinator (GIAN)

  
Prof. A Venu Gopal  
Course coordinator

Dr. A. Amala Mithin Minther Singh from **DMI College of Engineering, Chennai** participated in the GIAN course on *"Sustainable Manufacturing Technologies: Additive, Coating, Subtractive, and Hybrid"* organized by the **Department of Mechanical Engineering, NIT Warangal** from **25th to 29th November 2024**. The program focused on modern and sustainable approaches to manufacturing, highlighting **additive manufacturing, coating processes, subtractive machining, and hybrid methods**. Experts delivered lectures and case studies on how these technologies improve efficiency, reduce material waste, and contribute to environmentally responsible engineering practices. Through interactive sessions, participants gained exposure to **fabrication techniques, process optimization, and applications** of sustainable methods across industries. The course also emphasized the global importance of adopting eco-friendly and resource-efficient technologies. The knowledge acquired will support Dr. Amala Mithin Minther Singh in enhancing academic teaching, research, and guiding students toward innovative, sustainable engineering solutions.

# NPTEL BELIEVER AWARD



## CERTIFICATE OF APPRECIATION TO DR A AMALA MITHIN MINTHER SINGH

for being recognized as NPTEL CHAMPION  
JUL-DEC 2024

*Prof. Andrew Thangaraj*

**Prof. Andrew Thangaraj**  
Chair  
Centre for Outreach and Digital Education, IITM

*M. Vignesh*

**Prof. Vignesh Muthuvijayan**  
NPTEL Coordinator  
IIT Madras

**NPTEL CHAMPION**  
Candidate has to be present in 8/9/10/11/12 exams, passing atleast 8 of these exams



This is to certify that

**DR A AMALA MITHIN MINTHER SINGH**  
has successfully completed all the requirements for SWAYAM-NPTEL Domain Certification in  
**Faculty Domain - Advanced**  
(Faculty)  
The courses were completed in the period October 2024

*Prof. Andrew Thangaraj*  
**Prof. Andrew Thangaraj**  
Chair  
Centre for Outreach and Digital Education, IITM

*M. Vignesh*  
**Prof. Vignesh Muthuvijayan**  
NPTEL Coordinator  
IIT Madras


Roll No: NPTELD52420000993

To validate and check scores:  
<https://nptel.ac.in/>

**Course Details**

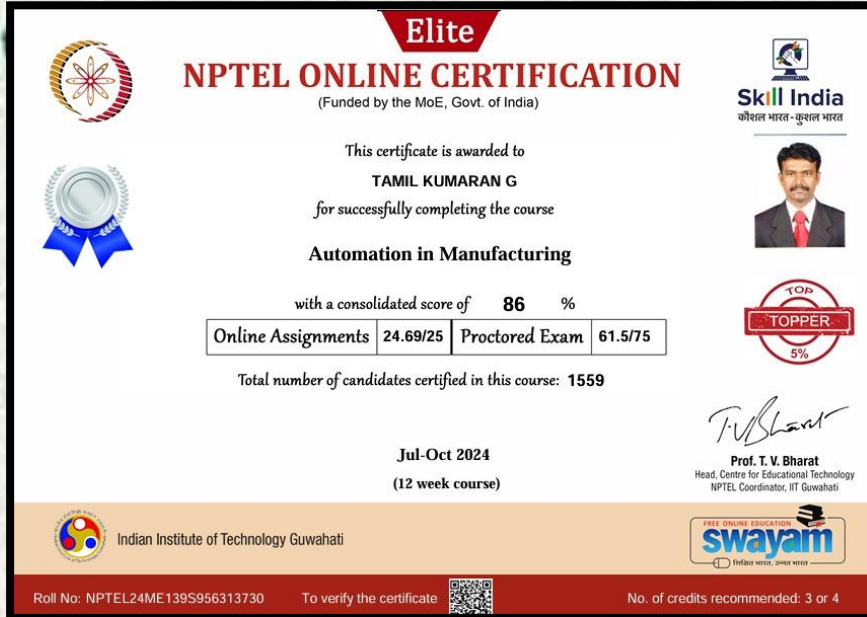
Course Type	Course Name	Duration	Offering Institute	Course Timeline	Marks (Out of 100)	GR Grade
core	Effective Engineering Teaching in Practice	4 weeks	IIT Madras	Jan-Feb 2023	70	
core	Ethics in Engineering Practice	8 weeks	IIT Kharagpur	Aug-Oct 2024	75	
core	Introduction To Professional/Scientific Communication	4 weeks	IIT Kharagpur	Jan-Feb 2024	71	
core	Teaching And Learning in General Programs Via	4 weeks	IISc Bangalore	Jul-Aug 2023	60	
core	Accreditation and Outcome Based Learning	8 weeks	IIT Kharagpur	Aug-Oct 2022	61	
Elective	Development Research Methods	8 weeks	IIT Bombay	Aug-Oct 2024	63	
Elective	Educational Leadership	8 weeks	IIT Kharagpur	Jul-Sep 2022	50	
Elective	Fracking of Fracems	12 weeks	IIT Bombay	Jul-Dec 2024	70	
Elective	Training and Development	12 weeks	IIT Kharagpur	Jan-Apr 2024	64	
Elective	Leadership and Team Effectiveness	12 weeks	IIT Bombay	Jan-Apr 2023	68	
<b>Total Marks</b>					<b>712</b>	

**Criteria for certification in Faculty Domain - Advanced Domain:**  
The candidate should complete the prescribed 5 core courses and 2 elective courses:  
1. Average of minimum of 60 marks in each course and should pass the courses too  
2. Average of all courses in the domain should be  $\geq 60$   
3. Sum of the domain of the courses should be  $\geq 600$



Dr. A. Amala Mithin Minther Singh, faculty member of DMI College of Engineering, Chennai, achieved significant recognition in the **NPTEL July–December 2024 session** by receiving multiple prestigious awards. He was honored with the **NPTEL Believer Award**, the **NPTEL Champion Recognition**, and was acknowledged as a **Faculty Domain Expert in Advanced Studies** under the Faculty Domain Certification scheme. To earn the Faculty Domain Advanced certification, Dr. Amala Mithin Minther Singh successfully completed a series of **core and elective courses** through NPTEL-SWAYAM offered by premier IITs. These included courses on *Effective Engineering Teaching in Practice*, *Ethics in Engineering*, *Introduction to Professional Scientific Communication*, *Teaching and Learning in General Programs*, *Accreditation and Outcome-Based Learning*, *Development Research Methods*, *Educational Leadership*, *Training of Trainers*, *Training and Development*, and *Leadership and Team Effectiveness*. The certifications demonstrated his commitment to continuous professional development, advanced pedagogy, and leadership in education. Through consistent dedication, he not only completed these rigorous courses but also excelled with commendable scores, accumulating a total of **712 marks** across different programs. This achievement reflects his pursuit of excellence in teaching, research methodologies, and institutional development. The recognitions highlight Dr. Amala Mithin Minther Singh's strong engagement with technology-enabled learning and his role in integrating innovative teaching methods into higher education. His achievements not only enhance his professional profile but also serve as an inspiration for fellow faculty and students to embrace lifelong learning and academic excellence.

# AUTOMATION IN MANUFACTURING



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

This certificate is awarded to  
**TAMIL KUMARAN G**  
for successfully completing the course  
**Automation in Manufacturing**

with a consolidated score of **86** %

Online Assignments	24.69/25	Proctored Exam	61.5/75
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Total number of candidates certified in this course: **1559**

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Guwahati

Prof. T. V. Bharat  
Head, Centre for Educational Technology  
NPTEL Coordinator, IIT Guwahati



Roll No: NPTEL24ME139S956313730 To verify the certificate No. of credits recommended: 3 or 4

swayam

This certification marks the successful completion of the 12-week NPTEL course "Automation in Manufacturing," offered by IIT Guwahati from July to October 2024. Funded by India's Ministry of Education, the course provided advanced training in industrial automation, a cornerstone of modern Industry 4.0 practices. To earn this credential, the candidate underwent a rigorous evaluation, excelling with a consolidated score of 86%. This impressive result was built upon a near-perfect assignment score (24.69/25) and a strong proctored exam performance (61.5/75). The certificate, verifiable via a unique roll number, carries a recommendation of 3-4 academic credits, attesting to its substantive value. Within a large cohort of 1,559 certified professionals nationwide, this achievement validates the holder's specialized expertise in automated systems, robotics, and smart manufacturing technologies. It serves as a significant credential, enhancing the recipient's qualifications for the rapidly evolving manufacturing sector.

# MATERIALS PROCESSING

## (CASTING, FORMING AND WELDING)



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

This certificate is awarded to  
**TAMIL KUMARAN G**  
for successfully completing the course


**Materials Processing (Casting, Forming and Welding)**

with a consolidated score of **77** %


Online Assignments	23.44/25	Proctored Exam	54/75
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Total number of candidates certified in this course: **158**


**Jul-Oct 2024**  
(12 week course)




**Prof. T. V. Bharat**  
Head, Centre for Educational Technology  
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No: NPTEL24ME108S656314537 To verify the certificate  No. of credits recommended: 3 or 4

This certification acknowledges the successful completion of the 12-week NPTEL course, "Materials Processing (Casting, Forming and Welding)," conducted by the Indian Institute of Technology Guwahati from July to October 2024. As an initiative funded by the Ministry of Education, Government of India, the course delivered in-depth knowledge of fundamental and advanced manufacturing processes essential to modern engineering. The candidate demonstrated a strong command of the subject, achieving a consolidated score of 77%, derived from excellent performance in online assignments (23.44/25) and the proctored examination (54/75). The certificate, bearing the endorsement of Prof. T.V. Bharat, Head of the Centre for Educational Technology and NPTEL Coordinator at IIT Guwahati, is verifiable through a unique roll number and carries a recommendation of 3-4 academic credits. This accomplishment is particularly notable within a select group of 158 certified professionals, highlighting the holder's specialized proficiency in critical material shaping and joining techniques.

# RAPID MANUFACTURING

**Elite**

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

This certificate is awarded to  
**SENTHIL KUMARAN M**  
for successfully completing the course

**Rapid Manufacturing**

with a consolidated score of **78** %

Online Assignments	24.38/25	Proctored Exam	54/75
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Total number of candidates certified in this course: 2026

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Kanpur

No. of credits recommended: 3 or 4

Roll No: NPTEL24ME115S756311008 To verify the certificate

**Elite**

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

This certificate is awarded to  
**RAJAMAHENDRAN S**  
for successfully completing the course

**Rapid Manufacturing**

with a consolidated score of **64** %

Online Assignments	23.44/25	Proctored Exam	40.5/75
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Total number of candidates certified in this course: 2026

Jul-Oct 2024  
(12 week course)

Indian Institute of Technology Kanpur

No. of credits recommended: 3 or 4

Roll No: NPTEL24ME115S856308622 To verify the certificate

**Elite**

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

This certificate is awarded to  
**ANBAZHAGAN**  
for successfully completing the course

**Fundamentals of Manufacturing Processes**

with a consolidated score of **60** %

Online Assignments	22.5/25	Proctored Exam	37.5/75
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Total number of candidates certified in this course: 584

Jul-Oct 2024  
(12 week course)

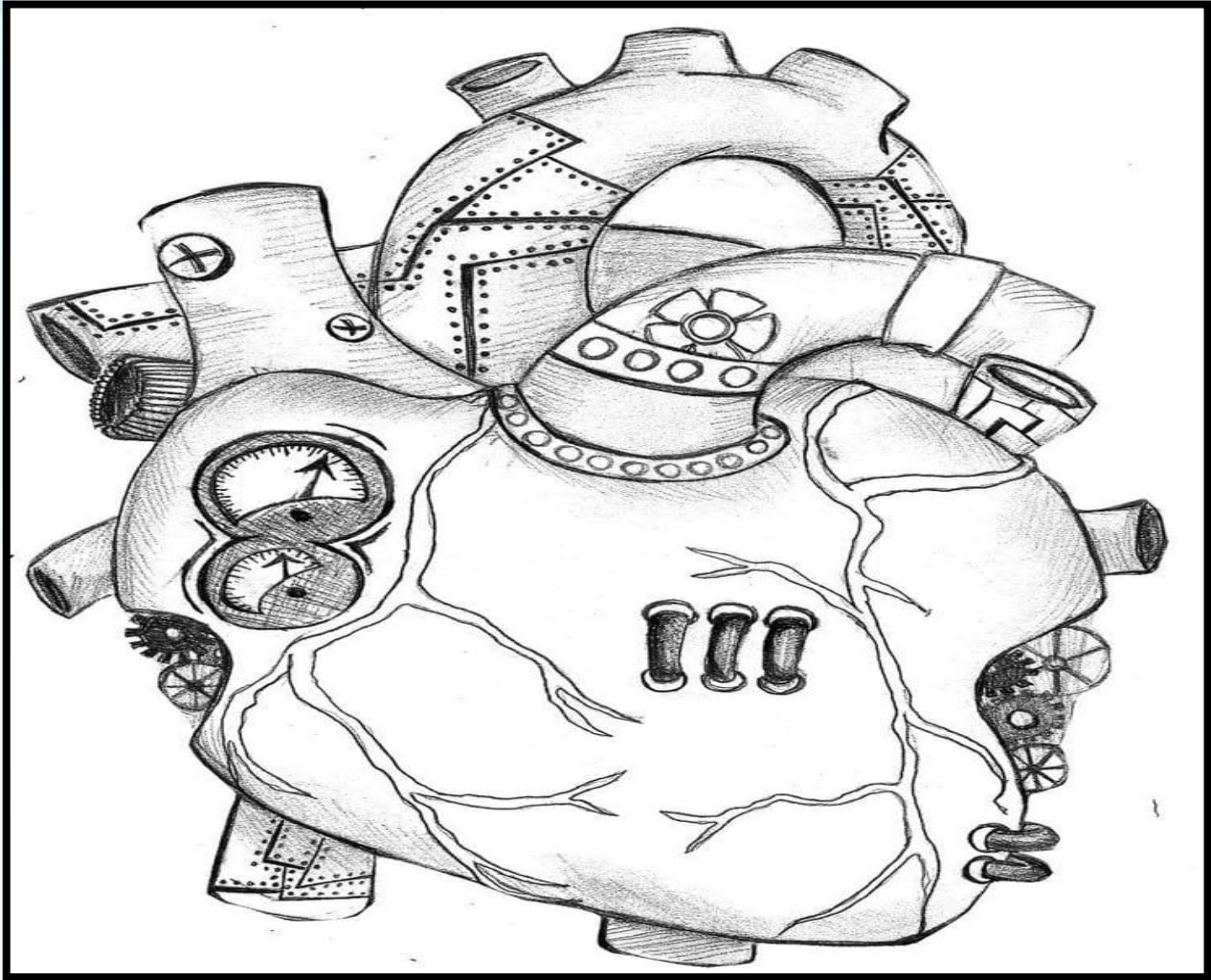
Indian Institute of Technology Roorkee

No. of credits recommended: 3 or 4

Roll No: NPTEL24ME123S952503547 To verify the certificate



This official certification from the National Programme on Technology Enhanced Learning (NPTEL) confirms the successful completion of the advanced 12-week course on "Rapid Manufacturing," conducted from July to October 2024. Funded by the Ministry of Education, Government of India, and administered through the prestigious Indian Institute of Technology Kanpur, this program is dedicated to exploring cutting-edge additive manufacturing and rapid prototyping technologies that are revolutionizing production processes across industries. The certification process involved a comprehensive evaluation system, balancing continuous assessment through online assignments with a final proctored examination. The candidate demonstrated exceptional proficiency in the subject matter, achieving a consolidated score of 78%, which reflects outstanding performance in the online assignments (24.38 out of 25) and a solid result in the proctored examination (54 out of 75). The document carries significant academic weight, bearing the official endorsement of Prof. B. V. Batish Kumar, Chairman of the Centre for Continuing Education at IIT Kanpur, and Prof. Satyaki Roy, the NPTEL Coordinator at the institute. It includes a unique verification number (NPTEL2AME1165768311008) for authentication purposes and carries a recommendation of 3-4 academic credits, underscoring its substantial curricular value. The course attracted widespread participation, with a total of 2026 candidates receiving certification nationwide, indicating the growing importance of rapid manufacturing skills in the contemporary industrial landscape. Particularly noteworthy is that among this large cohort, four staff members successfully completed the rigorous course requirements, highlighting the program's relevance for both academic and professional development. This achievement signifies the holder's advanced understanding of additive manufacturing principles, 3D printing technologies, and their practical applications in modern industrial settings, as validated by one of India's premier technological institutions. The certificate serves as a valuable credential that enhances the professional profile of the recipient, demonstrating specialized expertise in a field that is critical to innovation, customized production, and reducing time-to-market in today's competitive manufacturing environment.



BY  
GODSON.S  
(II YEAR-MECH)

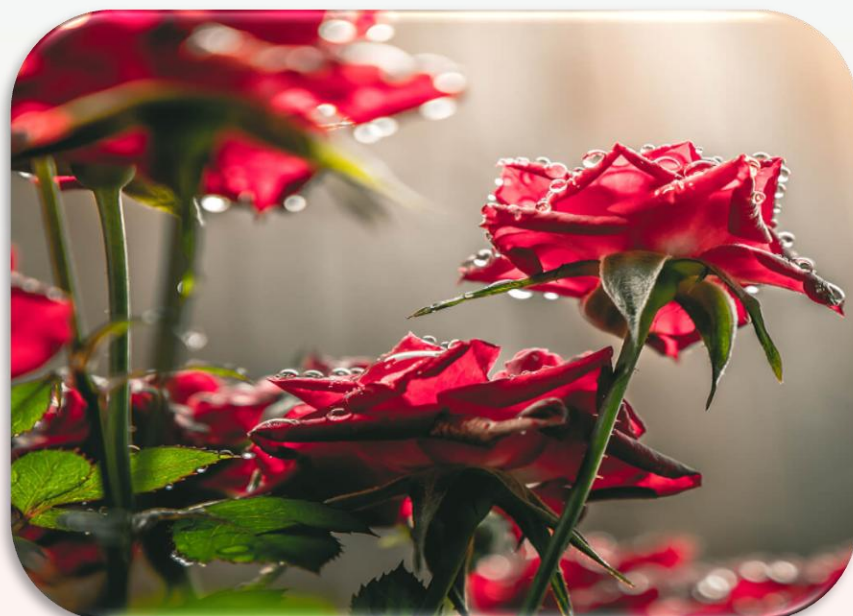


BY

**S.EBI PRINCE**

(III YEAR-MECH)

# PHOTOGRAPHY



# **MIECHONS'25**

**2025 Edition**

A detailed illustration of a man in a grey shirt and dark pants sitting on a complex arrangement of interlocking gears. The gears are in various sizes and colors, including silver, gold, and brown. Another man is visible in the lower right, working on a gear. The background is white, and the entire scene is set against a large, stylized graphic of purple and gold curved bands on the left side of the page.

**Annual Magazine  
Department of  
Mechanical Engineering**