NEW HORIZON
COLLEGE OF ENGINEERING

Department of Mechanical Engineering

INVITED TALKS

ACADEMIC YEAR: 2024-2025

SEMINARS & WORKSHOPS

SEMINARS & WORKSHOPS

Report on Faculty Development Program

Duration of the FDP	17/03/2025 – 21/03/2025
Timings	09:30 AM - 04:30 PM
Title of the FDP	Product Life Cycle Management and 3D Experience: Co-creating innovative Products and Services.
Organizing Departments	Mechanical Engineering, Applied Science and EDS Technologies, Bangalore.
Attendees	Faculty members of Mechanical Engineering and Applied Science.
Resource Person	Mr. Vishwa Kadadakatti, Senior Application Engineer, EDS Technologies.

Objective of the FDP
To enhance the knowledge of researchers and faculty members in the field of Product Life Cycle Management using 3D EXPERIENCE.

About the Resource Person
Mr. Vishwa Kadadakatti is a Senior Application Engineer at EDS Technologies in Bangalore, with three years of professional experience in the field.

Trainers Expertise
Trainers having 60+ certifications on CATIA V5, 3DEXPERIENCE Architecture and Installation fundamentals and ENOVIA, DELMIA, SIMULIA and BIOVIA by Dassault Systems. The trainers have more than 500 hours of training Experience on 3DEXPERINCE and CATIA V5 platform for Academic and Corporate customers like Infosys, Ferra Aerospace, Dynamatics, Ather Electric, KGTTI, Tech Mahindra, and so on. TXO (Data Model Customization). Overview of the training is done for academic customers like RVCE, KLETU, NHCE, BMSCE, NMIT , and so on.

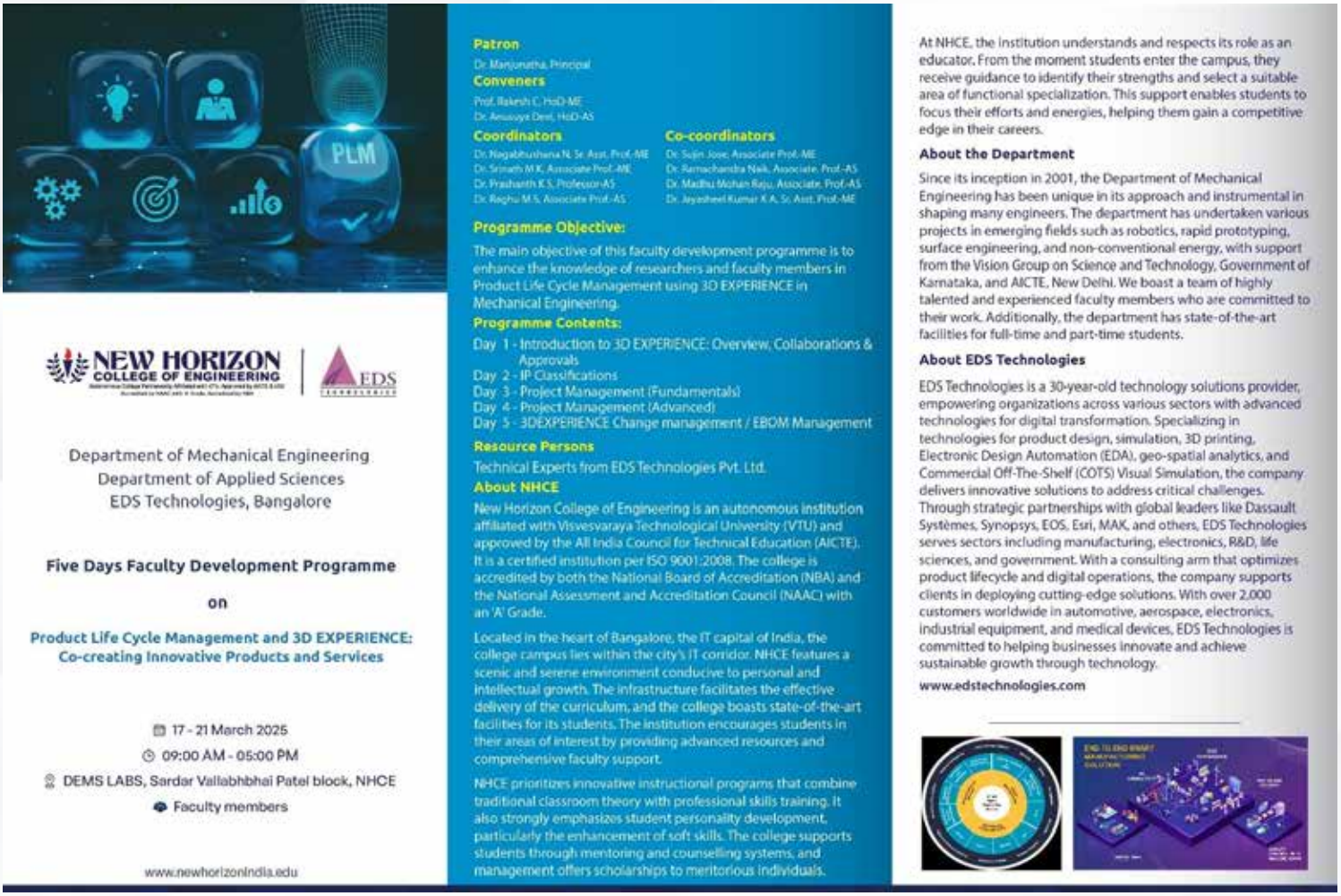
Programme Contents
DAY -1 Introduction to 3DEXPERIENCE overview and, Collaborations and Approvals
DAY -2 IP Classifications

DAY WISE SCHEDULE	ENOVIA TRAINING MODULES	HANDS-ON DETAILS
DAY -1 17/03/2025	Introduction to 3DEXPERIENCE overview and Collaborations and Approvals	Creating and working with basic features of 3DEXPERIENCE applications like (3DDashboard, 3DSpace, 3DDrive, 3Dswym, 3DNotifications, 3DSketch, 3DPlay and Widgets,). Collaboration and Approvals: Managing, Creating and working with Bookmark Workspaces, Assigned Tasks, Issues, Routes to accomplish the assigned tasks, and Common Document Module.
DAY -2 18/03/2025	IP Classifications	IP Classifications: Creating Document, Part, General Library Hierarchy (Library> Class/family>folders>Sub folders> documents within hierarchy). Working with document objects – (Check-in >Check-out, retaining the obsolete documents). Creating Attributes and assigning them with the classes created and classifying library objects.
DAY -3 19/03/2025	Project Management (Fundamentals)	Project Management (fundamentals): Creating programs and projects > Scheduling and assigning members > Creating issues flowing routes and Task > monitoring status programs and projects>
DAY -4 20/03/2025	Project Management (Advanced)	Project Management (Advanced): Managing Risks, Resources, Creating budgets and benefits. Creating and working with quality objects assessing projects and tracking projects.
DAY -5 21/03/2025	3DExperience Change Management / EBOM Management	Change Management: Creating and working with Engineering change request, order, and action and validating change process. EBOM Management Overview of the platform and the importance of EBOM in product lifecycle management>EBOM Creation and Configuration>Version Control and Change Management>Collaboration and Data Sharing EBOM Analysis and Reporting>Integration with MBOM and Manufacturing Systems

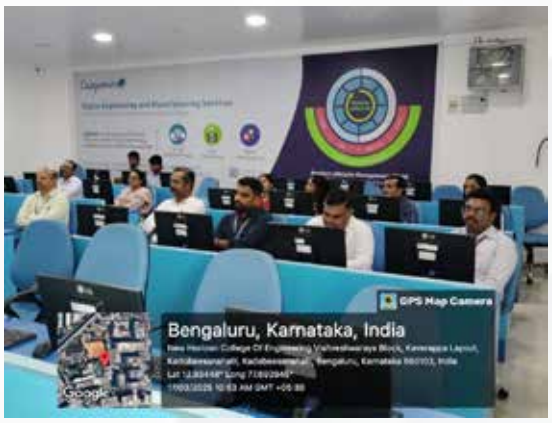
Conclusion:

5. Student Feedback

The visit to MGIRED was highly informative and inspiring. Students appreciated the hands-on demonstrations of renewable energy technologies and the interactive sessions on rural development. The exposure to real-world sustainable practices deepened their understanding and sparked interest in energy conservation and rural innovation. Overall, it was an enriching experience.



Glimpses of the Faculty Development Program



CO-CURRICULAR ACTIVITIES

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Industrial Visit Report

Organization: Mahatma Gandhi Institute of Rural Energy and Development

Date of Visit	25/04/2025
Location	3J86+M5Q, Srirampura Cross, Rachenahalli, Jakkuru, Bengaluru, Karnataka-560064
Department	Mechanical Engineering
Attendees	4th and 6th Semester Students
Accompanied by	Dr. Nagabhushana N and Prof. Ravikumar M
Duration	09:30 AM - 04:30 PM

1. Objective of the Visit
Understand and explore sustainable and renewable energy solutions, rural development technologies, and energy conservation practices aimed at empowering rural communities. This visit helped students gain practical insights into the implementation of rural energy programs, green technologies, and policies that promote self-sufficiency and environmental sustainability in rural areas.

2. Company Overview
The Mahatma Gandhi Institute of Rural Energy and Development (MGIRED), located in Bengaluru, Karnataka, was established in the year 2000 with the support of the Ministry of New and Renewable Energy (MNRE), Government of India, and the Rural Development and Panchayat Raj Department, Government of Karnataka. Its primary aim is to serve as a center for capacity building and awareness programs in rural energy and sustainable development,

3. Key Areas of Focus During the Visit
The following are the Key Areas of Focus During the Visit to the Mahatma Gandhi Institute of Rural Energy and Development (MGIRED):
- Renewable Energy Technologies
- Energy Conservation and Management
- Skill Development and Training Programs
- Sustainable Rural Development
- Environmental Protection Initiatives
- Research and Demonstration Units
- Government Policies and Programs

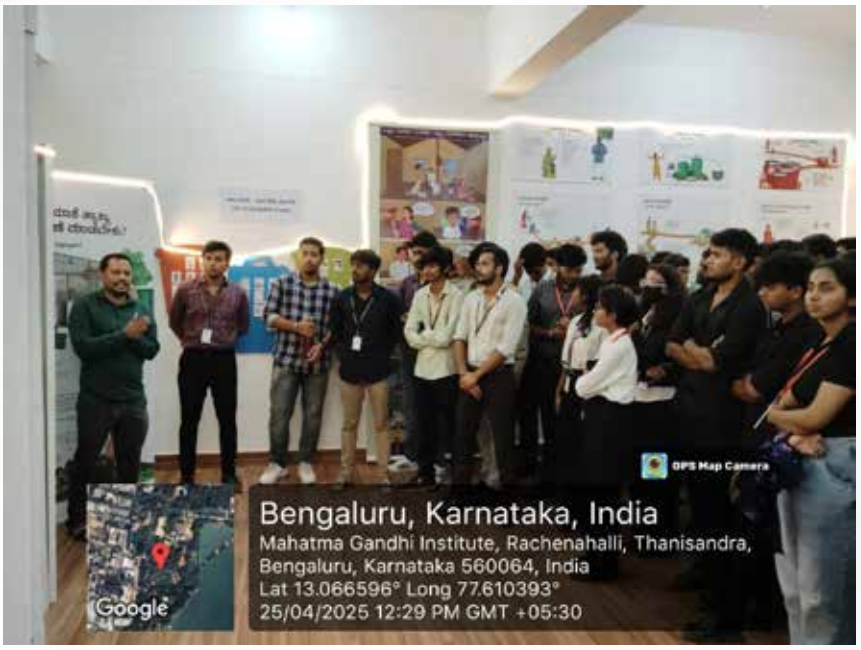
4. Key Learnings
During the visit to MGIRED, we learned about renewable energy technologies, energy conservation techniques, and sustainable rural development practices. We gained insights into government initiatives, skill development programs, and the importance of environmental protection. The visit highlighted how innovative energy solutions can empower rural communities and promote eco-friendly living.

5. Student Feedback

The visit to MGIRED was highly informative and inspiring. Students appreciated the hands-on demonstrations of renewable energy technologies and the interactive sessions on rural development. The exposure to real-world sustainable practices deepened their understanding and sparked interest in energy conservation and rural innovation. Overall, it was an enriching experience.

6. Conclusion

The industrial visit to MGIRED provided valuable insights into renewable energy, rural development, and sustainable practices. It enhanced our practical knowledge and understanding of real-world applications of green technologies. The experience emphasized the importance of innovation, energy conservation, and community empowerment in shaping a sustainable and self-reliant rural future.



CO-CURRICULAR ACTIVITIES

Industrial Visit Report

Company Name: Nandi Toyota Motor World Private Limited

Date of Visit	11/03/2025
Location	#46/3A, Kudlu Gate,7th Mile, Hosur Road, Bengaluru 560068.
Department	Mechanical Engineering
Attendees	4th Semester Students
Accompanied by	Dr. Nagabhushana N and Dr. Sudarshan T A
Duration	09:30 AM - 04:30 PM

1. Objective of the Visit
The goal of the industrial visit to Nandi Toyota was to offer students hands-on experience with the automotive manufacturing and business operations related to Toyota vehicles. This visit was designed to connect theoretical learning with actual industrial practices.

2. Company Overview
Nandi Toyota is one of the leading authorized dealers of Toyota Kirloskar Motors (TKM) in India. It operates a network of state-of-the-art sales, service, and spare parts facilities, primarily based in Bangalore, Karnataka. The company is known for providing a premium customer experience, offering a wide range of Toyota vehicles, and maintaining high standards in customer service and satisfaction.

3. Key Areas of Focus During the Visit
Service and Maintenance
- After-Sales Service
- Customer Service and Feedback Handling
- Body and Paint Workshop
- Sales and Marketing
- Vehicle Display and Test Drive Process
- Sales Process and Customer Engagement
- Toyota U-Trust (Certified Pre-Owned Vehicles)

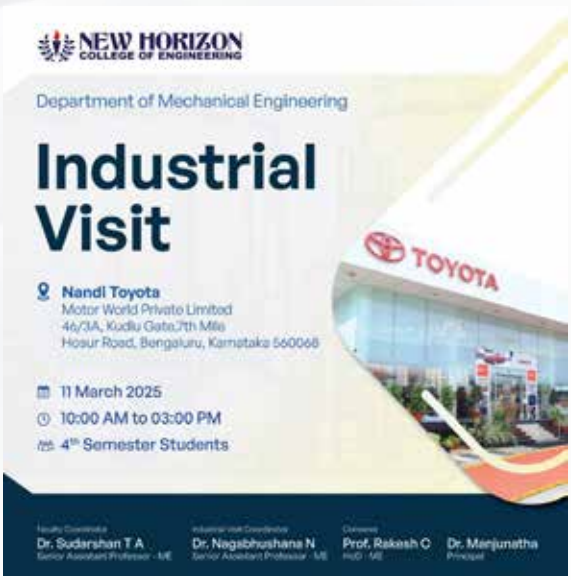
Focusing on these key areas, participants have gained comprehensive understanding of how Nandi Toyota manages its operations, ensures customer satisfaction, and maintains its reputation as a leading Toyota dealership in India.

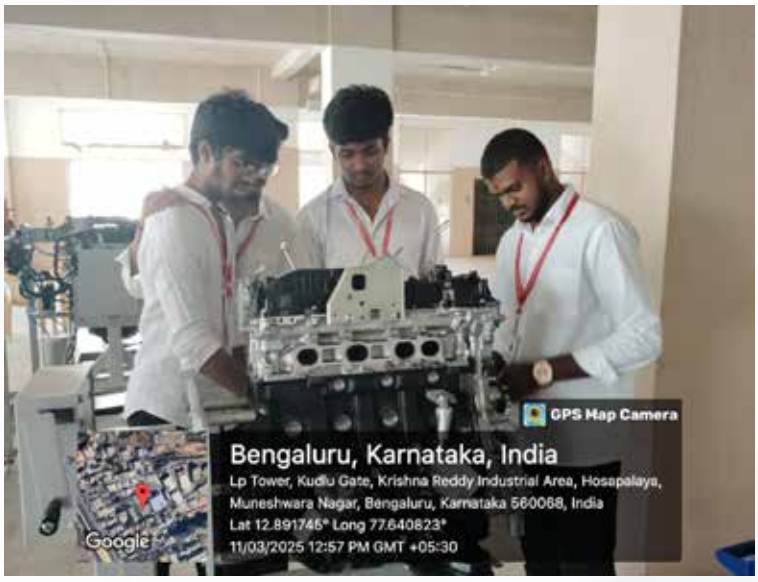
4. Key Learnings
The industrial visit to Nandi Toyota provided valuable insights into the automotive industry and the Toyota way of doing business. The key takeaways from the visit can be categorized into four main areas:
a. Operational Excellence
Kaizen (Continuous Improvement):
Quality Control and Assurance:
Customer-Centric Approach:
After-Sales Support:
Toyota U-Trust (Pre-Owned Vehicle Certification)

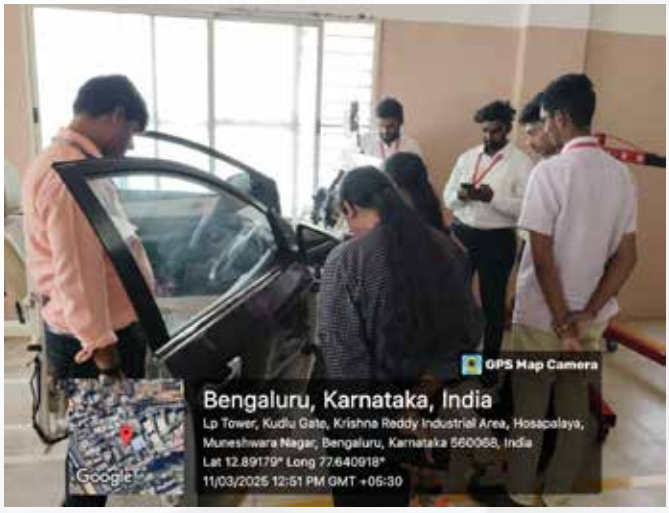
b. Technological and Sustainable Practices
Hybrid and Electric Vehicle Technology
Advanced Driver Assistance Systems (ADAS)
Environmental Responsibility
Business and Management Insights
Sales and Marketing Strategy
Dealer-Company Relationship
Employee Training and Development

5. Student Feedback
The industrial visit to Nandi Toyota was an excellent learning experience, combining theoretical knowledge with real-world application. It gave us a better understanding of automotive manufacturing, customer service, and business operations. We are thankful to Nandi Toyota for hosting us and providing such a valuable opportunity.

6. Conclusion
The visit to Nandi Toyota enhanced the participants' knowledge of automotive business operations and technical processes, reinforcing the significance of efficiency, quality, and customer focus in the automotive industry. This experience will undoubtedly benefit the students in their academic and professional journeys, inspiring them to apply these insights in their future careers.







CO-CURRICULAR ACTIVITIES

Workshop

Design Drawing and Engineering Visualization

Date of Visit	13th March 2025
Venue	Industry 4.0, New Horizon College of Engineering
Department	Mechanical Engineering
Facilitator	Mr. Balachandra N Pawar, Founder and Director, Seshnag Technologies

1. Introduction

On 13th March 2025, the Department of Mechanical Engineering at New Horizon College of Engineering organized a workshop titled "Design Drawing and Engineering Visualization." The workshop was held at the Industry 4.0 facility of the college and was led by Mr. Balachandra N Pawar, the Founder and Director of Seshnag Technologies, a leading company specializing in design and engineering solutions. The session aimed to provide valuable insights into the vital areas of design drawing and engineering visualization, which are essential for modern mechanical engineering and product development.

This workshop was attended by students of 4th semester and faculty members all of whom gained practical exposure to cutting-edge techniques and tools used in the engineering design process.

2. Objectives of the Workshop

The workshop had several key objectives, which were:

- To introduce participants to the fundamental concepts of design drawing and engineering visualization.
- To demonstrate the importance of accurate design drawings in the development of mechanical products.
- To showcase modern software tools used for creating detailed design drawings and 3D models.
- To discuss emerging trends in engineering visualization, including augmented reality (AR) and virtual reality (VR), and their applications in the design and manufacturing sectors.

3. Content Covered

The workshop was divided into theoretical discussions, practical demonstrations, and handson activities. Below is an overview of the key topics covered during the event:

3.1 Introduction to Design Drawing and Visualization

Mr. Pawar began the workshop by emphasizing the significance of design drawing and visualization in engineering. He explained how these elements help engineers communicate complex ideas clearly and accurately, ensuring that the design and manufacturing process is carried out smoothly. He introduced the participants to basic types of engineering drawings, such as orthographic views, sectional views, and isometric projections.

3.2 Design Drawing Fundamentals

Mr. Pawar outlined the essential principles of creating accurate and detailed design drawings. The session focused on various drawing techniques used in mechanical engineering, such as dimensioning, scaling, and projections, which are fundamental for manufacturing products with high precision. He stressed the importance of clear annotations, proper scale, and correct projection methods to avoid errors during the manufacturing process.

3.3 Engineering Visualization: The Role of 3D Modelling and CAD

The facilitator provided an in-depth overview of the role of 3D modelling and computer-aided design (CAD) in modern engineering visualization. He demonstrated how 3D models enhance the visualization of complex parts, making it easier to detect design flaws, test product functionality, and prepare for manufacturing. Mr. Pawar introduced the attendees to industrystandard CAD software such as Solid Works, AutoCAD, and CATIA, discussing the features and advantages of each tool.

3.4 Augmented Reality (AR) and Virtual Reality (VR) in Engineering Design

In this session, Mr. Pawar highlighted the growing importance of AR and VR in engineering design and product development. He discussed how these technologies enable engineers to visualize products in real-time, conduct virtual testing, and improve collaboration among team members. The potential applications of AR/VR for design validation and prototyping were explored, with examples from the industry showcasing their benefits.

3.5 Practical Hands-On Session

A significant portion of the workshop was dedicated to a hands-on practical session where participants worked with Solid edge. Under Mr. Pawar's guidance, attendees learned how to create a basic 3D model, apply necessary dimensions, and generate technical drawings suitable for manufacturing. The session allowed participants to gain practical experience in using professional software tools, bridging the gap between theoretical knowledge and real-world application.

3.6 Emerging Trends and Future of Engineering Visualization

The workshop concluded with a discussion on emerging trends in design and visualization. Mr. Pawar shared his insights on how the integration of AI and machine learning is poised to further enhance the design process by automating repetitive tasks and optimizing designs. He also touched on the future role of Industry 4.0 technologies in transforming the design and manufacturing landscape.

SEMINAR

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4. Outcomes and Key Takeaways

The workshop was highly informative, and the following key takeaways were highlighted by the participants:

- A deeper understanding of the critical role of design drawing and engineering visualization in mechanical product development.
- Hands-on experience with SolidWorks and other design software tools, improving skills in 3D modelling and technical drawing creation.
- A clear understanding of the importance of precise design communication and the impact of errors on the manufacturing process.
- Insights into emerging technologies like AR/VR and their transformative impact on engineering design and prototyping.
- Practical knowledge of the integration of advanced tools and technologies in modern engineering practices.

Afternoon session

5. Feedback and Conclusion

The workshop received good feedback from participants, who appreciated the detailed demonstrations and practical exposure to industry-standard tools. Many students expressed how the session significantly enhanced their understanding of the design process and its real-world applications. The hands-on session, in particular, was well-received as it provided them with an opportunity to apply theoretical knowledge to practical tasks.

The Department of Mechanical Engineering at New Horizon College of Engineering extends its sincere gratitude to Mr. Balachandra N Pawar for his insightful session. His expertise and practical approach helped participants grasp complex concepts with ease. The department also appreciates the active participation of all attendees and looks forward to organizing similar events in the future to further enrich students' learning experiences.

6. Acknowledgments

We would like to thank Mr. Balachandra N Pawar for his time and effort in conducting this valuable workshop. Special thanks to Seshnag Technologies for their support in making this event possible. We also extend our gratitude to the organizing team, faculty, and students who contributed to the success of the workshop.

Report Prepared by: Prof. Shiva Prakash.S Department of Mechanical Engineering New Horizon College of Engineering

NEW HORIZON
COLLEGE OF ENGINEERING

Department of Mechanical Engineering

Workshop

Design Drawing and Engineering Visualization

13 March 2025

10:00 AM - 05:00 PM

4th Sem Students

Industry 4.0 Lab

Mr. Balachandra N Pawar
Founder & Director
Seshnag Technologies

Faculty Coordinator

Prof. Shivaprakash S
Senior Assistant Professor - ME

Convenor

Prof. Rakesh C
HOD - ME