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Learn Beyond

**KPR Institute of
Engineering and
Technology**

(Autonomous, NAAC "A")

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VISION

To be recognized as a premier centre in the field of mechanical engineering education, research and development to meet the changing needs of industry and society.

MISSION

The Department of Mechanical Engineering is committed to,

- ✦ Provide fundamental and skill-based education in mechanical engineering through innovative practices in teaching and learning.
- ✦ Establish centers of excellence in collaboration with reputed industries, professional bodies and research laboratories.
- ✦ Promote entrepreneurship with leadership qualities, ethics, and human values for the society at large.

PROGRAM EDUCATION OBJECTIVES (PEO)

Graduates of BE Mechanical Engineering four years after graduation will:

- ✦ **PEO1:** Excel in their professional career with competencies in the field of mechanical and allied engineering.
- ✦ **PEO2:** Apply modern research and simulation tools to solve industrial and societal needs.
- ✦ **PEO3:** Practice professional and ethical values in respective organizations and society.

PROGRAM SPECIFIC OUTCOMES (PSO)

Graduates of Mechanical Engineering should:

- ✦ **PSO 1:** Design, develop and implement advanced mechanical systems by applying engineering principles for improved performance and less human effort.
- ✦ **PSO 2:** Apply quality tools to ensure quality, articulate maintenance principles and demonstrate managerial skills to comprehend the mechanical engineering processes, products and services.

DEPARTMENT EVENTS

PROGRAMS ORGANIZED

- Discover the inner workings of the automobile industry's mechanical marvels with a captivating session on the 'Role of Design of Machine Elements in Automobile Industries,' featuring the distinguished Suresh Kumar P, Founder and Managing Director of BAS Institute & Inspection Services. The automotive landscape is a fusion of innovation and precision engineering. At the heart of this intricate ecosystem lies the Design of Machine Elements (DME), a field that shapes the functionality, durability, and safety of vehicles. Suresh Kumar P, a visionary leader with a profound understanding of this domain, will take participants on an enlightening journey into the significance of DME within the context of automobile manufacturing. This session is a must-attend for engineering professionals, students, and enthusiasts who are keen to deepen their understanding of the intricate mechanics behind automobiles.

The poster is for a guest lecture organized by the Department of Mechanical Engineering at KPRIET. The title is 'GUEST LECTURE ON ROLE OF DME IN AUTOMOBILE INDUSTRIES'. The speaker is Mr. Suresh Kumar P, Founder & Managing Director of BAS Institute & Inspection Services. The event details are: Venue: III MECH A, Date: 24 AUG 2023, Time: 11:30 - 12:30 PM. The poster includes the KPRIET logo, the BAS logo, and social media icons for KPRIETOnline.



- The guest lecture on 'Product Life Cycle Management with Software Tools' was held on the 22nd of August 2023 from 3:20 PM to 4:20 PM. The session aimed to provide insights into the various stages of product development

and how software tools, particularly PLM (Product Lifecycle Management) software, play a vital role in managing and optimizing the product life cycle. Mr. G. Sureesh, Assistant Manager – R&D at RANE (Madras) Ltd., Chennai, was the distinguished guest speaker for the session. Mr. G. Sureesh delivered a comprehensive presentation on the different phases of Advanced Product Quality Planning (APQP) and how software tools, specifically PLM software, streamline the product development process.

The poster features the KPR Institute of Engineering and Technology logo at the top left, with the tagline 'Learn Beyond' and '(Autonomous, NAAC "A")'. Below this, it states 'DEPARTMENT OF MECHANICAL ENGINEERING ORGANISES INDUSTRIAL GUEST LECTURE ON'. The main title is 'Product Life Cycle Management with Software Tools'. The time is listed as '03:20 PM to 04:20 PM' and the date as '22 August, 2023'. A circular portrait of Mr. G. Sureesh is shown on the right. Below the portrait, it identifies him as 'Guest Speaker Mr. G. Sureesh, Asst. Manager - R&D, RANE (Madras) Ltd., Chennai.' At the bottom, it specifies the audience: 'For the IV Year Students studying the course U19MEP30 - PRODUCT LIFE CYCLE AND MANAGEMENT'. A Google Meet Code 'uhf-vuzk-kqp' is provided in a green box. The footer includes the website 'kpriet.edu.in' and social media icons for Facebook, Instagram, and YouTube, along with the text 'KPRIETonline'.

- ✿ The 'Basis Vehicle Design: Safety and Aerodynamics' event offered a comprehensive exploration of two critical aspects of vehicle engineering. The safety segment delved into crash structures, occupant protection, and safety systems, emphasizing the importance of structural integrity and innovative safety technologies. The aerodynamics module covered the intricacies of airflow management, downforce generation, and drag reduction techniques, showcasing how aerodynamic advancements enhance both performance and efficiency. Interactive sessions and expert presentations enriched the learning experience, enabling participants to grasp the synergistic relationship between safety and aerodynamics in modern vehicle design. Ultimately, the event fostered a deeper appreciation for the multifaceted considerations shaping the automotive industry. Attendees gained expertise in real-time data's role in decision-making. The

event also spotlighted sustainability trends and future innovations, leaving participants well-equipped to appreciate Formula 1's intricate blend of technology and competition. Overall, the program successfully bridged theory and practice, empowering enthusiasts and potential engineers alike.



DEPARTMENT OF MECHANICAL ENGINEERING
AND OFFICE OF ALUMNI RELATIONS
ORGANISES SEMINAR ON

Fundamentals of F1 car design & Data Acquisition

🕒 10: 00 am

📅 19, August, 2023

GOOGLE MEET LINK :
<https://meet.google.com/jp-v-kjbu-aur>



Guest Speaker

JAGADEESH .S.P

An Alumnus of 2014 - 2018 Batch
Vehicle performance analyst - Formula
One, Biggin Hill, England, UK

CONVENOR
Dr. S. RAMESH BABU HoD/Mech

COORDINATORS
Mr. N. VIGNESHKUMAR, AP (Sr.G)/Mech
Dr. M. KUMAR, AsP/Mech
Dr. S. GOKULKUMAR, AP (Sr.G)/Mech

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➤ In collaboration with the Indian Welding Society, the Department of Mechanical Engineering orchestrated an enlightening guest lecture. The subject under focus was 'Challenges and Opportunities in Robotic Welding,' and the esteemed speaker was Mr. S. Ramanathan, a Technical Project Manager at Kavin Inc., Coimbatore. The event was scheduled for August 12, 2023, from 11:00 AM to 12:30 PM. The lecture drew a keen audience of approximately 72 enthusiasts, all eager to absorb the insights shared. Mr. Ramanathan eloquently underscored the imperative of welding automation and its burgeoning significance across industries. He adeptly delved into the diverse array of robots, manipulators, and controllers that find application in the realm of robotic welding for various purposes. Mr. Ramanathan is poised to delve into a comprehensive array of topics in subsequent sessions, which encompass the fundamentals of robotic welding, ensuring robot safety,

discerning diverse robot applications, meticulous selection of robots and axes tailored to specific applications, and the intricacies of robot accessories in alignment with varying applications. Moreover, the speaker will delve into the nuances of robot teaching, encompassing TPC (Teach Pendant Control), WOC (Welding Offline Programming), Multi-end effectors, and command logics. The practical dimension will be enriched through hands-on training, familiarizing participants with different types of robot accessories and external axis applications. The usage of simulation software, the art of fixture design, and the application of Robotic add-on software, along with their underlying principles, will also come under the spotlight.

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G20 India 2023
IWS
Great Place To Work Certified

Department of Mechanical Engineering
Is organizing an Industry Oriented Guest Lecture on

Challenges and Opportunities In Robotic Welding

Resource Person
Mr. S. Ramanathan,
Technical Project Manager
Kavin INC., - Automation & Robotic Technology Center,
Coimbatore.

Coordinator
Dr. B. Arulmurugan, Associate Professor
Convener
Dr. S. Ramesh Babu, Professor & Head
Department of Mechanical Engineering.

12 AUGUST
2023
11:00 AM
IV ME A Classroom

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© 2023 Supports the Sustainable Development Goals

- Two Days Software Workshop on Ansys Workbench from 25th to 26th August 2023 Organized by Department of Mechanical Engineering in Association with Centre for Machining and Material Testing (CMMT). Key Highlights of the Workshop: Designed for Beginners to Intermediate Learners and Theory Session as well as Hands-on-Session will be Covered.



KPR Institute of Engineering and Technology
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Department of Mechanical Engineering and Centre for Machining and Material Testing (CMMT) is organizing a

Two Days Software Workshop on Ansys Workbench

25 and 26 August, 2023

The Speaker

Ms. Kavya L
NVH Simulation Engineer
Volvo Group Ltd.,
Bengaluru.

Ansys Workbench is a commercial software package which helps an engineer to solve structural problems in a smoother fashion and come up with design conclusions at a faster pace. Ansys package helps you to customize your solution as per your requirement and automate and parameterize the solution for faster results. Ansys Workbench is the industry's best structural simulation tool to start your venture into Finite Element Analysis (FEA), which is the building block of virtual analysis and simulation. After completing this course, you will be able to do a complete structural analysis from scratch till the end including Pre-Processing and Post-Processing. This course will take you through linear structural analysis, basic dynamic analysis, and basic non-linear problem definition along with model preparation, meshing and model (CAD) clean-up. You will have a stable foundation to pursue structural simulations of your own custom problem along with the knowledge of techniques to improve the quality of your results.



FACULTY PUBLICATIONS

INTERNATIONAL JOURNALS:

- Kumar, K.R., Gokul, M. and Kumar, M., 2023. Investigations on Mechanical Properties and Characterisation of Polylactic Acid/Aluminium Metal Infill Polymer Composites Manufactured by Fused Deposition Modelling. *Journal of Materials Engineering and Performance*, pp.1-14.
- PRAKASAM, M.J.S., Murugesan, P., Pasupathi, M.K., Rapuru, L., Balaji, P. and Murugesan, V., Investigating the Performance of a Flat Plate Solar Water Heating System using CeO₂/Water Nanofluid–A Holistic Approach. *Journal of Enhanced Heat Transfer*.

STUDENTS ACHIEVEMENTS

The achievements from the Department of Mechanical Engineering in various events are displayed below.



Achieved First Prize at ISNEE Motorsports, SISTECH, Ratibad, Bhopal

STUDENTS PLACEMENTS

The placement achievements of the students of the Department of Mechanical Engineering in various reputed companies are listed below.

S.NO	ROLL NO	NAME OF THE STUDENT	COMPANY NAME
1	20ME026	DHIVYA SANKAR K	AR4 TECH
2	20ME027	DINESH A	JOSH AUTOMATION
3	20ME036	HIRTHICK K	LGB
4	20ME037	IDHAYARAJA S	AR4 TECH
5	20ME044	KARTHICKK RAHUL S	KONE
6	20ME047	KARUPPASAMY G	JOSH AUTOMATION
7	20ME051	KRISHNAKUMAR G	KONE
8	20ME052	LOGESHWARAN S	AR4 TECH
9	20ME060	NITHISH P	AR4 TECH
10	20ME074	SATHEESKUMAR B	AR4 TECH
11	20ME080	SIVAPRASAD M S	KAAR
12	20ME086	THAYANANTH J	SKILL PLUSE
13	20ME089	VEERARAGHAVAN V	AR4 TECH
14	20ME090	VIBIN M K	AR4 TECH
15	711321208019	PREMKUMAR N	AR4 TECH
16	711321208020	SACHINVIKKAAS S	JOSH AUTOMATION