

MECHANICAL NEWS LETTER

JUNE-2024

MECHANICAL ENGINEERING

universal engineering college , Thrissur



VISION

Provide excellent engineering education to create competent and innovative mechanical engineers to cater the society with strong ethical values

MISSION

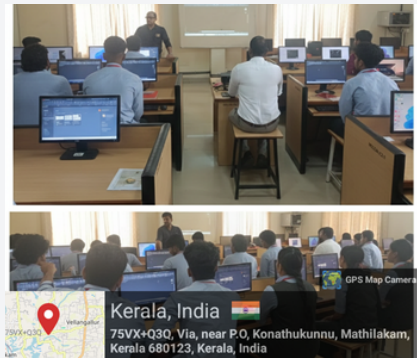
- To produce technically skilled and innovative engineering graduates through experienced faculty and robust infrastructure.
- Foster the students to achieve lifelong learning and to become competitive through proper curriculum delivery and holistic development strategies.
- To inculcate multidisciplinary approach in engineering and to prepare them for global skill set
- Mould the students to be socially, ethically and environmentally responsible citizens

WORKSHOP ON PRIMAVERA



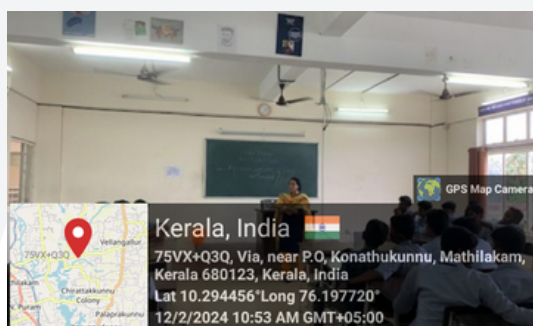
The Department of Mechanical Engineering at Universal Engineering College conducted a one-day workshop on Primavera on 31 January 2024 at the Seminar Hall, B-Block. The sessions were led by Mr. Manoj from CADD Centre, Kodungallur, and attended by Mechanical Engineering students. The programme included introductions to Primavera, project planning and scheduling, resource management, followed by hands-on practice and a Q&A session. The workshop focused on

Practical project management skills using real-time examples. Participants gained an understanding of Primavera fundamentals, project scheduling, resource allocation, and tracking techniques, along with practical experience in using industry-relevant project planning tools.



LEADERSHIP SKILLS

A Leadership Skill session was conducted on 12th February 2024 at Universal Engineering College, led by Ms. Suprabha C C, Assistant Professor, Department of Applied Science and Humanities. The session aimed to help students understand the importance of leadership and develop essential leadership qualities for academic, professional, and personal growth. The session covered leadership fundamentals, styles, and the difference between leadership and management, supported by real-life examples. Interactive activities such as role-playing, decision-making tasks, and team-building exercises helped students practice leadership skills in a practical manner.



Students found the session informative and motivating, gaining confidence in communication, decision-making, and team management. Overall, the program successfully encouraged students to adopt a proactive mindset and cultivate leadership skills, contributing to the development of future leaders.

REPORT ON WORKSHOP ON CHILLER PLANTS

A Workshop on Chiller Plants was organized by the Department of Mechanical Engineering, Universal Engineering College, Irinjalakuda, in association with ISHRAE – Kochi Chapter, on 21st February 2024 from 10:00 AM to 12:30 PM. The session was led by Mr. Syed Nazif S, Student Activities Chair, ISHRAE Kochi Chapter. The workshop aimed to provide students with theoretical and practical knowledge of modern HVAC systems, including chiller plants, cooling towers, pumps, AHUs, and FCUs. The interactive session enhanced students'



understanding of chiller plant operations, key HVAC components, and energy efficiency practices. Overall, the program was informative and

motivated students to explore career opportunities in the HVAC field

UNIVERSAL ENGINEERING COLLEGE
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DEPARTMENT OF MECHANICAL ENGINEERING

ISHRAE
KOCHI CHAPTER

WORKSHOP ON CHILLER PLANTS

Types of chillers, Cooling Towers, Pumps, Air Handling units and Fan coil Units

21/02/2024 | 10.00 AM - 12.30 PM

Resource person
Mr. Syed Nazif S
ISHRAE KOCHI
Student activities chair

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EXPERT TALK ON TRANSMISSION IN MULTI AXLE VEHICLES

UNIVERSAL ENGINEERING COLLEGE
NAAC Accredited Institution

DEPARTMENT OF MECHANICAL ENGINEERING

EXPERT TALK ON TRANSMISSION IN MULTI-AXLE VEHICLES

DATE: 22/02/2024
TIME: 9:30 AM - 12:30 PM

AUTOBAHN ACADEMY

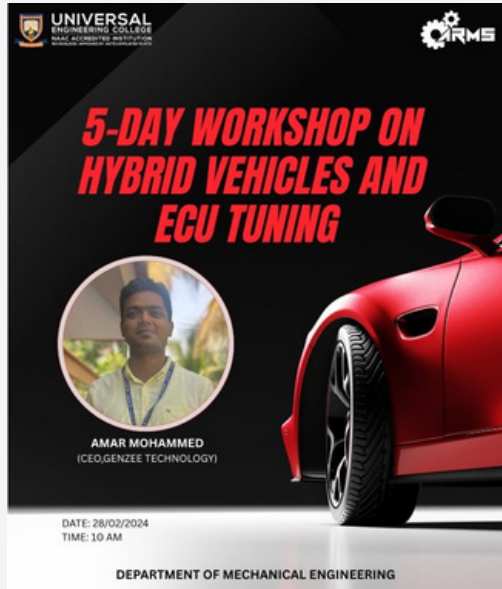
An expert talk on Transmission Systems in Multi-Axle Vehicles was organized by the Department of Mechanical Engineering, Universal Engineering College on 22 February 2024 at the Seminar Hall, B-Block, in collaboration with Autobahn Academy. The session was attended by Mechanical Engineering students. The expert explained the working principles of transmission systems used in heavy-duty and commercial vehicles, focusing on multi-axle load management, torque distribution, gear mechanisms, and drivetrain efficiency. The discussion highlighted applications of multi-axle transmission systems.

The program concluded with an interactive Q&A session, followed by a vote of thanks. The session enhanced students' understanding of advanced mechanical transmission

concepts relevant to large transport and specialty vehicles.ighted modern advancements and real-world industrial



5-DAY WORKSHOP ON HYBRID VEHICLES AND ECU TUNING



A 5-day workshop on Hybrid Vehicles and ECU Tuning was organized by the Department of Mechanical Engineering, Universal Engineering College on 28 February 2024. The workshop was conducted by Mr. Amar Mohammed, CEO of Genzee Technology, and was attended by Electrical and Electronics Engineering students. The program covered the fundamentals of hybrid vehicle systems, progressing through hybrid drivetrain architectures, ECU functionality, programming basics, advanced tuning, and calibration. The final day featured a live demonstration and interactive Q&A .

session, offering practical exposure to real-time ECU tuning. The workshop provided students with hands-on experience and enhanced their understanding of modern automotive electronics and sustainable vehicle technologies, equipping them with skills relevant to emerging trends in intelligent and hybrid vehicles



EXPERT TALK ON SOFTWARE DEFINED VEHICLES

An expert talk on Software Defined Vehicles was conducted on 6th March 2024 at Universal Engineering College, delivered by Mr. Shanmugam, Director of Design Desk India Pvt. Ltd. The session introduced students to the concept of software-defined vehicles and their growing importance in the automotive industry. The talk covered the evolution from hardware-centric to software-centric vehicle architectures, highlighting the role of embedded systems, AI, sensors, cloud connectivity, over-the-air updates, V2X communication, and cybersecurity.

Real-world case studies were shared to demonstrate practical applications and industry practices.

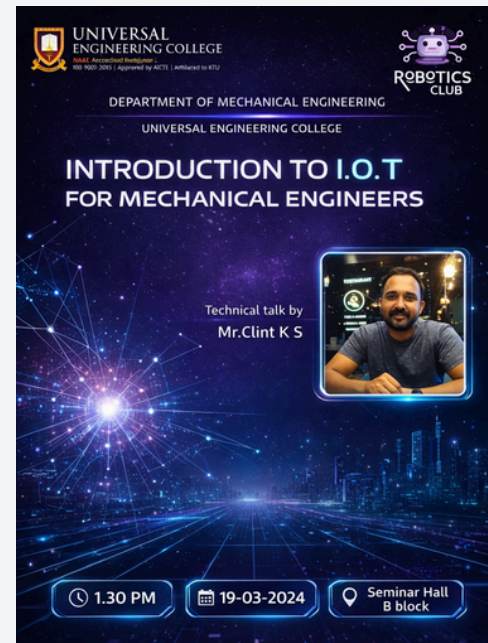


Students gained valuable insights into emerging trends, challenges, and career opportunities in automotive software development. The session was well received, with participants appreciating its relevance and industry orientation. Overall, the talk successfully enhanced students' understanding of modern vehicle technologies and inspired interest in automotive software systems.



INTRODUCTION TO I.O.T FOR MECHANICAL ENGINEERS

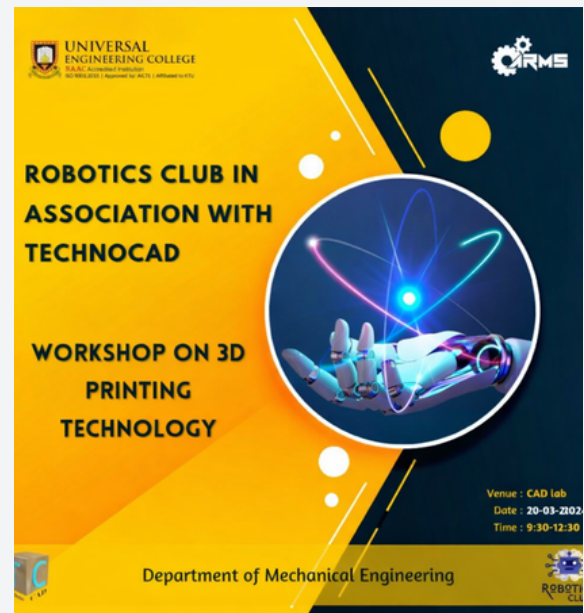
The Technical Talk on “Introduction to IoT for Mechanical Engineers” was organized by the Department of Mechanical Engineering, Universal Engineering College, in association with the Robotics Club, on 19th March 2024 at Seminar Hall, B Block. The session was delivered by Mr. Clint K S. The talk introduced students to the fundamentals of IoT, including architecture, sensors, actuators, microcontrollers, cloud connectivity, and real-time data transmission. Practical examples such as smart manufacturing, predictive maintenance, automated monitoring, and smart energy systems highlighted the relevance of IoT in modern engineering. A live .



demonstration provided hands-on exposure to sensor interfacing and real-time data visualization. The session enhanced students' technical awareness, interdisciplinary knowledge, and understanding of Industry 4.0 and smart factory concepts, motivating them to explore IoT-based projects and research. Overall, the program successfully bridged mechanical engineering with emerging digital technologies.

WORKSHOP ON 3D PRINTING TECHNOLOGY

The Workshop on 3D Printing Technology was organized by the Robotics Club of Universal Engineering College, in association with TechnoCAD, on 20th March 2024 at the CAD Lab. The program aimed to introduce mechanical engineering students to additive manufacturing and provide practical exposure to modern fabrication techniques. The session covered the fundamentals of 3D printing, FDM technology, CAD-to-print workflow, slicing software, and printer calibration. Students were introduced to materials like PLA and



ABS filaments, along with key printing parameters such as layer height, nozzle temperature, and printing speed. A live demonstration allowed students to observe the complete printing process and interact with the instructor. The workshop enhanced students' understanding of additive manufacturing, encouraged innovation, and helped bridge the gap between theoretical concepts and practical application in engineering projects and research.

EXPERT TALK ON IPR

An expert talk on Intellectual Property Rights (IPR) was conducted on 20th March 2024 at Universal Engineering College from 10:00 AM to 12:30 PM. The session was delivered by Dr. Prasanth R Nair, DST Fellow at Amrita Vishwa Vidyapeetham, with the objective of creating awareness about the importance of intellectual property in academics, research, and industry. The talk covered fundamental concepts of IPR, including patents, copyrights, trademarks, and industrial designs, along with national and international IPR frameworks. Dr. Prasanth explained the patent filing process, patentability criteria, timelines, and ethical aspects such as plagiarism and copyright infringement.

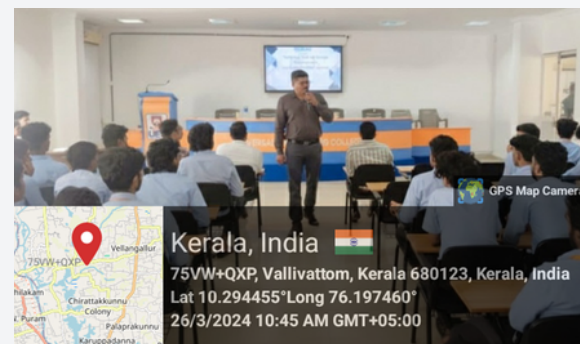


Real-world examples were used to highlight the role of IP protection in innovation and entrepreneurship. The session concluded with an interactive Q&A, where students and faculty discussed patenting student projects and startup ideas. Participants appreciated the clarity and relevance of the session, noting that it helped dispel common misconceptions about IPR. Overall, the program effectively emphasized the need for an IP-conscious academic culture and encouraged responsible innovation.



EXPERT TALK ON HVAC SYSTEM

An expert talk on HVAC Systems was conducted on 26 March 2024 by the Department of Mechanical Engineering at Universal Engineering College. The session was delivered by Mr. Rony Benjamin, Managing Partner of Hozon Engineering & Contracting, and was attended by Mechanical Engineering students. The talk covered an overview of HVAC systems, their classifications, thermal load calculations, energy-efficient design, and real-world applications. Drawing from industry experience, the speaker discussed practical challenges, solutions, and emerging trends such as sustainability and automation in HVAC design. The interactive session helped students gain practical insights into modern HVAC technologies and the importance of energy-efficient system integration.



TRUCK AT CAMPUS– ONSITE TECHNOLOGY AWARENESS PROGRAM



The “Truck at Campus” onsite awareness programme was conducted on 8 April 2024 by the Department of Mechanical Engineering at Universal Engineering College in collaboration with Autobahn Technology Academy. The event offered Mechanical Engineering students hands-on exposure to modern truck technology through live demonstrations of truck systems, diagnostics, and telematics. Students interacted directly with engine modules, control systems, and real-time

telemetry, gaining practical insight into commercial vehicle operations. The programme effectively connected theoretical automotive engineering knowledge with real-world industry applications and enhanced students’ understanding of current trends in commercial vehicle technology.



REPORT ON INTRODUCTION TO ROBOTICS PROGRAM

The Department of Mechanical Engineering, Universal Engineering College, organized a technical session titled “Introduction to Robotics” on 11th April 2024 at 1:00 PM in the Seminar Hall. The session was led by Mr. Sunil Paul, CEO of Srishti Robotics Technology Pvt. Ltd., who explained the fundamentals of robotics, including its evolution, components such as sensors and actuators, and industrial applications. A live

demonstration of robotic equipment was conducted, making the session interactive and



practical. The program was highly informative and helped students gain valuable insights into robotics technology and its real-world applications.