MECHANICAL NEWS LETTER

DECEMBER-2023

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

ASME Students Chapter Inauguration Ceremony Report

The ASME Students Chapter of the Department of Mechanical Engineering at Universal Engineering College was inaugurated on 15th August 2023 at 2:00 PM. The event marked an important step toward enhancing students' technical knowledge, leadership abilities, and industry exposure.

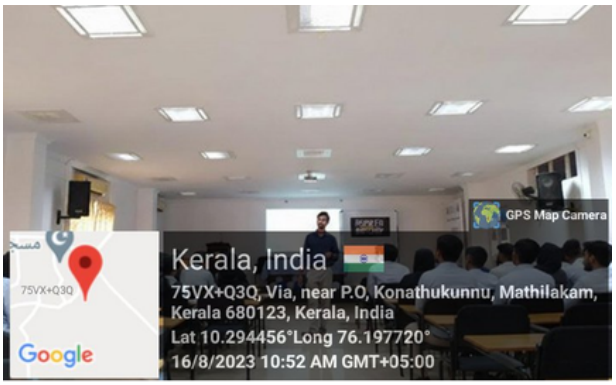
The ceremony began with a welcome address by the faculty coordinator, who highlighted the role of the American Society of Mechanical Engineers (ASME) in supporting professional growth and global networking. The Chief Guest, Prof. Dr. C.P. Sunil Kumar, Chairman of the Institution of Engineers (India), Thrissur Local Centre, emphasized continuous learning, professional ethics, and active participation in technical activities.

The program included lamp lighting, the formal inauguration, and the introduction of newly appointed student office bearers. The chapter aims to promote technical excellence, innovation, research, industry collaboration, and leadership skills through workshops, seminars, industrial visits, and participation in national and international ASME events.

The event concluded with a vote of thanks, marking the beginning of a strong technical and professional development platform for Mechanical Engineering students.

WORKSHOPON COMPUTATIONAL FLUID DYNAMICS (CFD)

A Workshop on Computational Fluid Dynamics (CFD) was conducted by the Department of Mechanical Engineering at Universal Engineering College on 16 August 2023 in the Seminar Hall, B-Block. The programme included sessions on CFD fundamentals, tools and techniques, and hands-on simulations, led by Mr. Antonio Joseph and Mr. Hridesh S, Assistant Professors of the department.



Mechanical Engineering students participated actively in the workshop. The sessions helped students understand mathematical modeling, CFD software applications, and practical simulation approaches, with relevance to thermal, aerodynamic, and fluid flow engineering systems. The event concluded with a Q&A session, feedback, and a vote of thanks.

CAREER ORIENTATION PROGRAM

A Career Orientation Program was organized by the Department of Mechanical Engineering at Universal Engineering College on 18 August 2023. The session was conducted by Mr. Cliff Marcus Dare, Certified NLP Trainer from Jay's Academy. The program focused on career goal setting, self-awareness, and professional development, incorporating neuro-linguistic programming (NLP) techniques to improve motivation, confidence, and focus.

interactive discussions and student engagement, participants gained insights into aligning personal strengths and interests with suitable career paths, helping them develop a positive and proactive approach toward their future careers

BASIC LIFE SUPPORT TRAINING

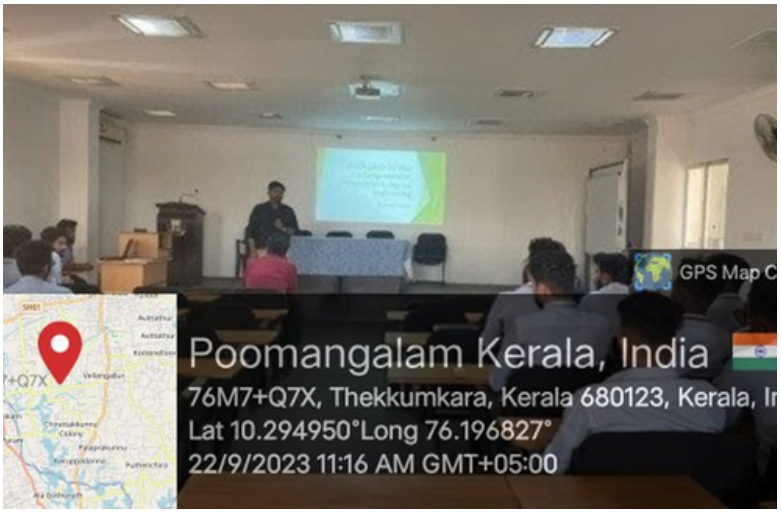
A hands-on Basic Life Support (BLS) training session was conducted on 22 September 2023 at Universal Engineering College, led by Dr. Johnson K Varghese from Aster Medicity, Kochi. The program aimed to equip students and staff with essential lifesaving skills and awareness of emergency medical response. The session covered the principles of BLS, the Chain of Survival, CPR techniques, airway management, recovery position, and the use of Automated External Defibrillators (AED), supported by live demonstrations and hands-on practice using manikins.

Participants actively engaged in simulated emergency scenarios and received expert feedback. The training was well received, boosted participants' confidence in handling real-life emergencies, and emphasized the importance of quick response and social responsibility.

WORKSHOP– 'EXPLORING THE POTENTIAL OF OIL AND GAS ENGINEERING'

The Department of Mechanical Engineering at Universal Engineering College organized a workshop titled "Exploring the Potential of Oil and Gas Engineering" on 22 September 2023 at the Seminar Hall, B-Block. The session was conducted by Mr. Ajay Manikandan, Trainer at the Core Institute of Technology, and was attended by Mechanical Engineering students.

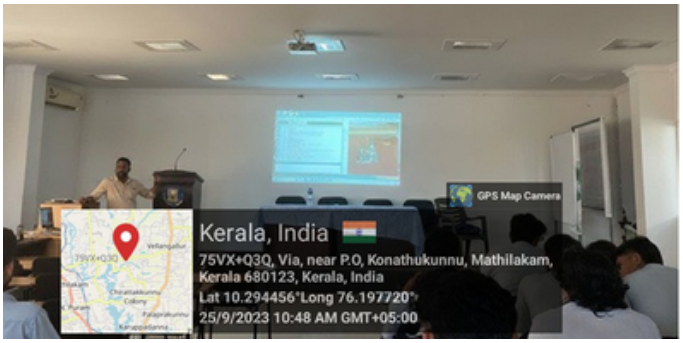
The workshop covered an overview of the oil and gas sector, key engineering roles and technologies, and the field challenges and career opportunities in the industry. Through interactive sessions and discussions, students gained insights into upstream and downstream operations, modern exploration and drilling technologies, and real-world industry practices. The event concluded with a Q&A session, feedback, and a vote of thanks, making it an informative and career-oriented program for the participants



WORKSHOP ON ARTIFICIAL INTELLIGENCE

The Mechanical Engineering Department of Universal Engineering College organized a Workshop on Artificial Intelligence on 25 September 2023. The session was led by Mr. Mohamed Faizal, Software Developer at Novitech R&D Pvt Ltd, and was attended by Mechanical Engineering students.

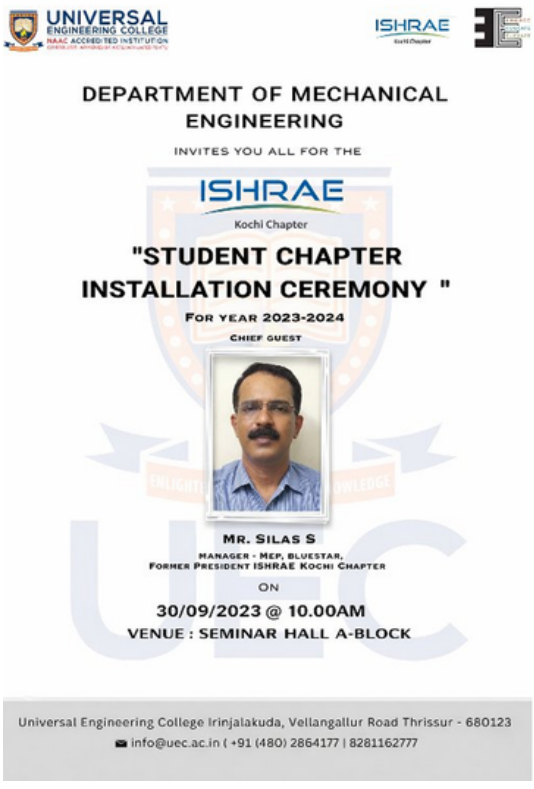
The workshop introduced participants to the fundamental concepts of Artificial Intelligence, its real-world applications, and basic AI tools through interactive and hands-on sessions. Emphasis was placed on the role



of AI in Industry 4.0 and the emerging career opportunities in intelligent systems. The program concluded with a Q&A session, feedback from participants, and a vote of thanks, making the workshop informative and practically oriented.

STUDENT CHAPTER INSTALLATION CEREMONY

The Department of Mechanical Engineering at Universal Engineering College organized the ISHRAE Student Chapter Installation Ceremony for the academic year 2023–2024 with enthusiastic participation from students and faculty. The event formally inaugurated the ISHRAE student chapter and aimed to create awareness about HVAC&R systems and professional development opportunities in the field. The ceremony featured a traditional lamp lighting and an inspiring address by Mr. Silas S, Manager – MEP at Bluestar and Former President of the ISHRAE Kochi Chapter, who highlighted the growing importance of HVAC&R in sustainable infrastructure and encouraged students to actively engage in technical activities.



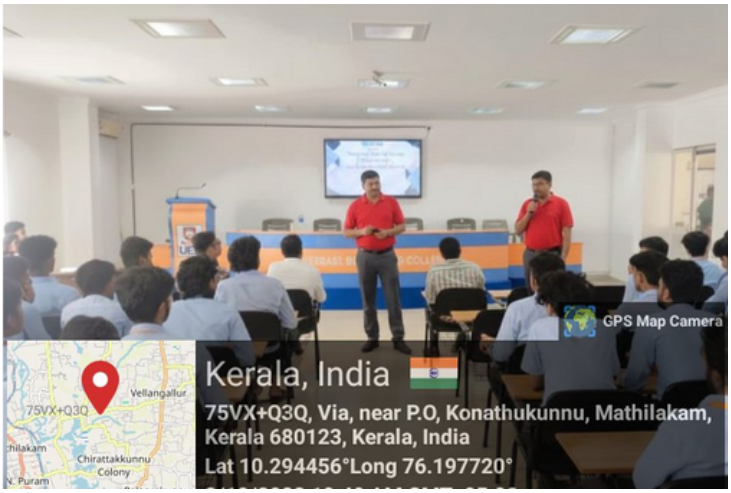


Student office bearers were officially installed, certificates were distributed, and the program strengthened industry–academia collaboration while motivating students to pursue continuous professional growth.

ADD-ONCOURSE PROFESSIONAL MEP TRAINING IN HVAC

The Department of Mechanical Engineering, Universal Engineering College, in association with the ISHRAE Students Chapter, launched an 80-hour HVAC and Revit MEP training program commencing on 03 October 2023. The course was structured over eight weeks, covering fundamentals of HVAC and psychrometry, heat-load calculations, ventilation and indoor air quality standards, Revit MEP modelling, duct and piping design, equipment layout, and energy analysis aligned with green building codes.

The program was led by Mr. Akhil Ramesh,



HVAC Trainer and Assistant Professor (ME), and focused on both theoretical concepts and hands-on practice. Participants developed skills in cooling-load estimation, HVAC system modelling using Revit MEP, understanding ASHRAE standards, and integrating energy-efficient design principles. The course concluded with a mini-project and assessment, and successful

participants received certification upon meeting the evaluation criteria.

REPORT ON ONE DAY WORKSHOP ON BUSINESS CANVAS MODEL

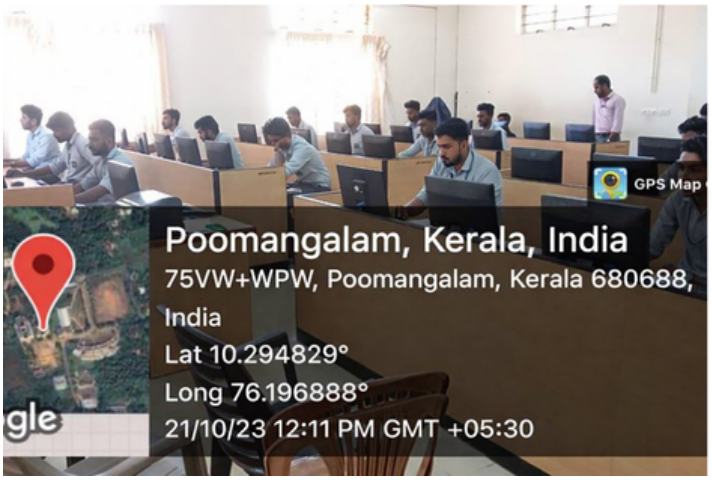
The Innovation and Entrepreneurship Development Centre (IEDC) of Universal Engineering College organized a One Day Workshop on Business Canvas Model on 13/10/2023 at Block B Seminar Hall to provide students with practical exposure to business planning and entrepreneurial thinking. The workshop introduced participants to the nine building blocks of the Business Model Canvas and explained how they help in developing sustainable business models. Through interactive discussions and team activities, students created their own business ideas, structured them using the canvas framework, and presented them for feedback.

The session enhanced students' understanding of startup strategy, improved their teamwork and problem-solving skills, and encouraged them to explore innovation and entrepreneurship. Overall, the workshop was informative, engaging, and successful in fostering an entrepreneurial mindset among students.

CAD Master 2.0

A 2D Drafting Competition Conducted by Techno CAD Club

The Techno CAD Club of the Mechanical Engineering Department at Universal Engineering College organized "CAD Master 2.0", a 2D drafting competition for S4 and S6 Mechanical Engineering students on 21 October 2023 at 11:00 AM in the CAD Lab, B-Block. A total of 16 students registered and actively participated in the event. The competition aimed to enhance students' drafting skills and technical proficiency in CAD. Cash prizes were awarded to the winners, with ₹500 for first place, ₹300 for second place, and ₹200 for third place. Sreehari C P secured first place, followed by Adith Sudhi in second place and Jenis Jose in third place.



The prize distribution ceremony was held on 13 March 2023 at 1:00 PM in the Seminar Hall, B-Block. The program began with a welcome speech by Mr. Denny C D, Faculty Coordinator of Techno CAD Club. Dr. Premsankar, HoD of the Mechanical Engineering Department, inaugurated the ceremony and distributed the certificates and cash prizes. The event concluded with a vote of thanks by Mr. Vimal N A, Faculty Coordinator of Techno CAD Club.

ANTI- DRUG AWARENESS PROGRAM

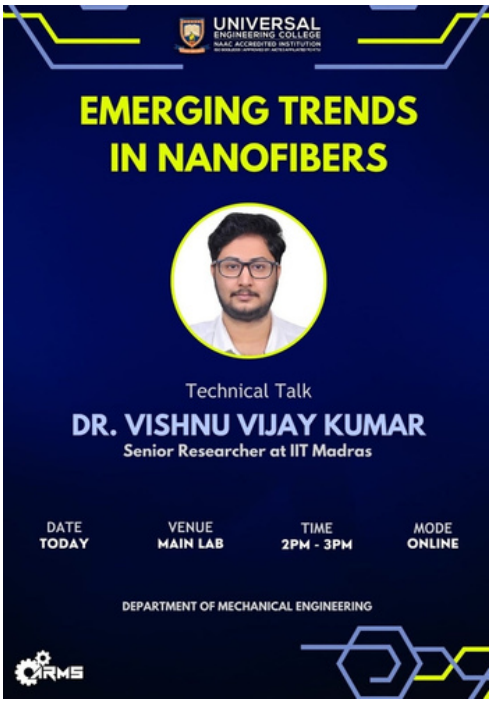
The Department of Mechanical Engineering, Universal Engineering College, organized an Anti-Drug Awareness Program on 26 October 2023 at the Seminar Hall, B-Block. The session was led by Mr. C. R. Pradeep, Grade Sub Inspector, Mathilakam Police Station, Thrissur Rural.

The program included an awareness talk, interactive discussion, and a Q&A session, with active participation from Mechanical Engineering students. The resource person highlighted the health, psychological, social, and legal consequences of drug abuse, using real-life examples to stress the seriousness of the issue. .

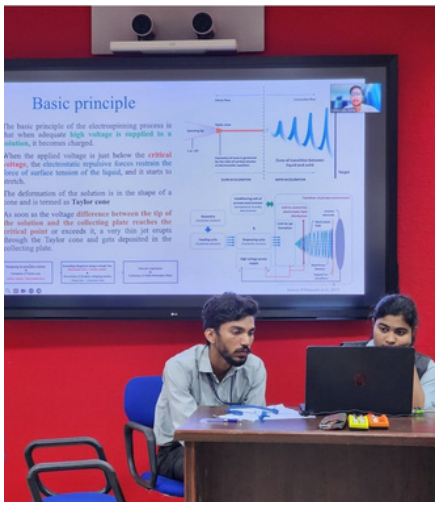
Students were encouraged to adopt a drug-free lifestyle and take responsibility in spreading awareness within their communities.

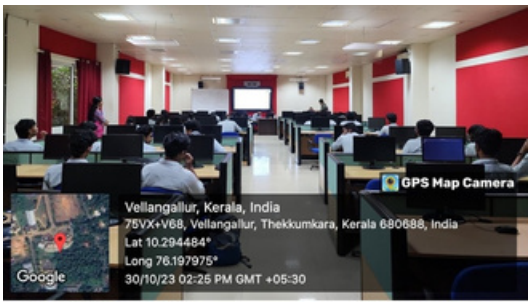
Overall, the program successfully sensitized students to the dangers of substance abuse and reinforced the importance of youth involvement in anti-drug initiatives

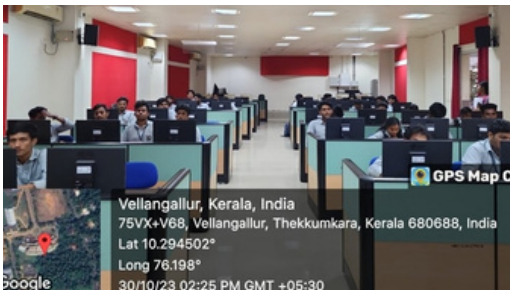
TECHNICALTALK–EMERGING TRENDS IN NANOFIBERS



The Department of Mechanical Engineering, Universal Engineering College, organized an online technical talk on 30 October 2023 from 2:00 PM to 3:00 PM, which was live-streamed in the main computer lab. The session was delivered by Dr. Vishnu Vijay Kumar, Senior Researcher at IIT Madras. The talk focused on emerging trends in nanofiber technology, highlighting advanced manufacturing techniques such as electro-spinning, centrifugal spinning, and solution blowing. Dr. Vishnu Vijay Kumar discussed cutting-edge applications of nanofibers in areas including filtration, biomedical engineering, smart textiles, and energy storage, supported by real-time microscopy visuals and simulation results. He also emphasized scalable production methods and interdisciplinary research opportunities.



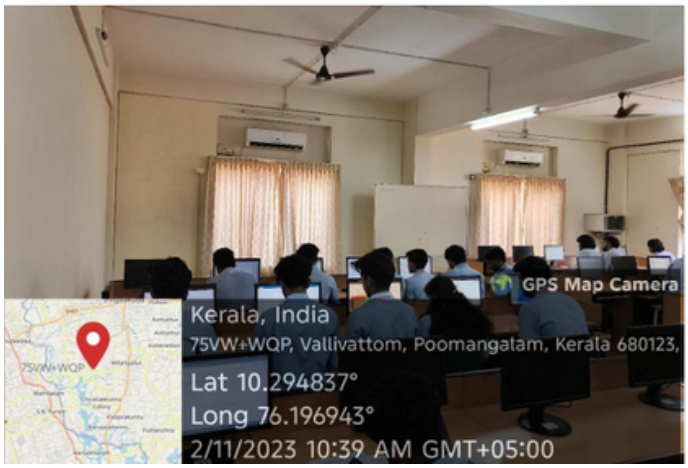




The session concluded with an interactive Q&A, where students explored career prospects, research collaborations, and project opportunities in nanotechnology. Overall, the program provided valuable insights into the latest developments and applications of functional nanofibers.

REPORT ON ONE DAY WORKSHOP ON BUSINESS CANVAS MODEL

The One Day Workshop on Business Canvas Model significantly enhanced students' understanding of entrepreneurship, business strategy, and startup development. Participants were introduced to the nine key components of the Business Model Canvas and learned how each element contributes to building a sustainable and structured business model. Through interactive sessions and team-based activities, students gained practical experience in identifying problems, developing innovative solutions, and organizing their ideas systematically. .



The workshop also strengthened essential skills such as strategic thinking, teamwork, communication, leadership, and problem-solving. Constructive feedback from the resource person helped students refine their concepts and understand market feasibility. Overall, the workshop successfully promoted innovation, encouraged entrepreneurial thinking, and motivated students to actively explore startup opportunities

EXPERTTALK ON LIGHTWEIGHT OPTIMIZED DESIGNS

The Department of Mechanical Engineering, Universal Engineering College, organized an expert talk on 6 November 2023 at the Seminar Hall, B-Block. The session was delivered by Ms. Payal Pawar, Application Engineer at Altair, and was attended by Mechanical Engineering students. The talk focused on the principles of lightweight and optimized design, emphasizing material reduction without compromising structural strength. Ms. Pawar introduced the use of simulation tools such as Altair HyperWorks and explained their role in design validation through practical case studies.

The session highlighted how optimized design techniques are widely applied in the industry to enhance performance, efficiency, and sustainability. Overall, the program provided valuable insights into modern design optimization practices and their real-world engineering applications.

REPORT ON TWO DAYS HANDS-ON WORKSHOP ON DRONE TECHNOLOGY

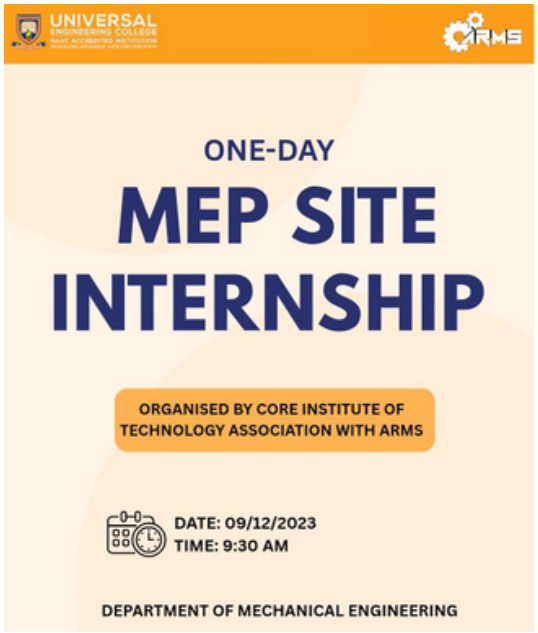
The Department of Mechanical Engineering, Universal Engineering College, in association with the Robotics Club and ARMS, organized a Two Days Hands-on Workshop on Drone Technology on 15th and 16th November 2023 at Block-B Seminar Hall, powered by Dronimagination. The workshop aimed to provide students with practical and theoretical knowledge of drone systems, including components, aerodynamics, control systems, safety measures, and real-time applications in fields such as agriculture, surveillance, and logistics. The first day focused on the basics of drone technology and its working principles, while the second day provided hands-on training in assembling drones, sensor calibration, flight controller configuration, and live flying practice.

fields Sessions on legal regulations and responsible drone usage were also conducted. The program concluded with feedback and certificate distribution, successfully enhancing students' technical skills and motivating them to explore careers in robotics, automation, and aerospace .

TRAINING BY AUTOBAHN TECHNOLOGY ACADEMY

The Department of Mechanical Engineering at Universal Engineering College organized a technical session titled "Training by Autobahn Technology Academy" on 30/11/2023 at the B-Block Seminar Hall. The program aimed to provide industry-oriented exposure and enhance students' knowledge in automotive electronics, embedded systems, and communication technologies. Expert trainers introduced modern automotive systems, focusing particularly on radio transmitter and receiver systems and their applications in vehicles. The interactive session included practical explanations and demonstrations, helping students connect theoretical concepts with real-world applications. The training enhanced students' understanding of automotive communication systems, increased awareness of industry-required skills, and motivated them to pursue advanced technical training and career opportunities in the automotive and embedded systems fields.

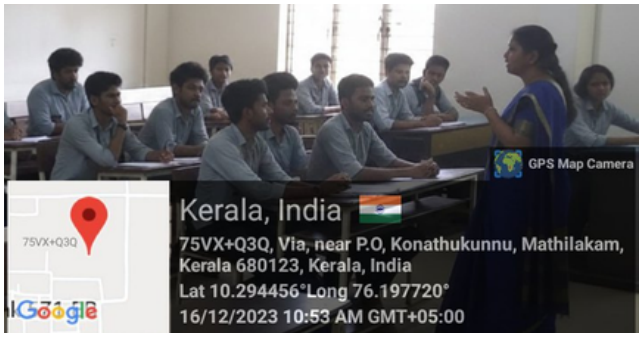
ONE- DAY MEP SITE INTERNSHIP



The Department of Mechanical Engineering, Universal Engineering College, organized a one-day MEP Site Internship on 9 December 2023 for Mechanical Engineering students. The program was conducted by Mr. Sunil Kumar, MEP Trainer from the Core Institute of Technology. The internship provided students with hands-on exposure to Mechanical, Electrical, and Plumbing (MEP) systems used in construction projects. Activities included a safety briefing, site walkthrough, system identification, and practical observations of building services such as HVAC, electrical supply, and plumbing layouts. Interactive Discussions and Q&A sessions helped students relate theoretical concepts to real-world applications. Overall, the program effectively bridged academic learning with industry practices, enhancing students' understanding of MEP systems, coordination processes, and on-site safety protocols.

SOFTSKILL ADD- ON COURSE

The Department of Mechanical Engineering, Universal Engineering College, conducted a Soft Skill Add-on Course on 16 December 2023 at the Seminar Hall, B-Block for Mechanical Engineering students. The program was led by Mrs. Nirmala Parameswaran, a certified JCI Trainer. The course comprised sessions on communication skills, team building and leadership, goal setting, and self-motivation. Through interactive activities and real-life examples, the trainer emphasized the importance of confidence building, teamwork, and a positive mindset for personal and professional growth.

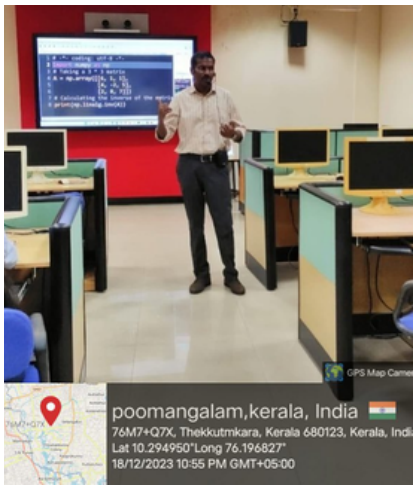


Overall, the program effectively enhanced students' soft skills, preparing them to face real-world and workplace challenges with improved communication, leadership abilities, and self-confidence.

ADD- ON COURSE ON PYTHON

The Department of Mechanical Engineering, Universal Engineering College, conducted an Add-on Course on Python Programming on 18 December 2023 at the CAD Lab for Mechanical Engineering students. The course was led by Dr. Sreeraj R, Head of the Department of Computer Science and Engineering.

The program introduced students to the fundamentals of Python, covering core concepts such as variables, loops, conditionals, data structures, functions, file handling, and basic libraries. Hands-on practice sessions enabled students to apply their learning by developing simple applications.



Overall, the course provided a strong foundation in Python programming, enhancing students' computational skills and preparing them for future applications in engineering and technology