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Department Of Mechanical Engineering



CCE DIGEST

STAFF EDITOR

MR. REYNOLD JOSE, A.P; M.E

STUDENT EDITOR

JOSEPH JOHN E (S6 ME)

VISION

To become a nationally recognised knowledge hub in Mechanical Engineering by moulding professionally competent and socially responsible engineers.

MISSION

To create a conducive learning platform for students to excel as professionals, through quality technical education and training.

To involve students in socially committed projects and programs to broaden their knowledge and integrity. To mould students with good leadership qualities, ethical values, and life-long learning.

HOD's DESK

Dear Students, It is with great pride that I present this edition of the CCE Digest, which reflects the vibrant academic and professional culture of the Department of Mechanical Engineering. This issue showcases the collective efforts of our students and faculty in advancing technical knowledge through experiential learning, industry collaboration, innovation, and community engagement.

Throughout the semester, our department has continued to create opportunities that encourage critical thinking, practical problem-solving, and lifelong learning. The achievements featured in these pages demonstrate the enthusiasm, creativity, and commitment of our students in embracing new technologies, strengthening technical competencies, and contributing meaningfully to society.

I extend my sincere appreciation to our faculty members, student associations, alumni, industry partners, and well-wishers for their continuous support in making these initiatives successful. Their collective efforts have strengthened our learning ecosystem and inspired our students to strive for excellence.

I hope this newsletter serves as a source of motivation for every reader and encourages our students to continue pursuing knowledge with curiosity, integrity, and determination. I wish you all continued success in your academic and professional journey.

Dr. Viswanath K Kaimal

Head of the Department

Student Enrichment Program on Fusion 360

From 16–21 June 2025, the Department of Mechanical Engineering, organized a Student Enrichment Program on Fusion 360 at the Computer Lab, Third Floor, St. Chavara Block, for Third Semester B.Tech Mechanical Engineering students. The programme was conducted by Mr. Raghu C. V., Design Engineer, CADD Campus India Pvt. Ltd., Kochi, under the coordination of Mr. Sanjesh K. S. and Mr. Jackwin Vincent K., Asst. Professors, Dept. of ME. The six-day hands-on training introduced students to the fundamentals and advanced features of Autodesk Fusion 360, covering topics such as 2D sketching, parametric modelling, assembly design, rendering, and basic Computer-Aided Manufacturing (CAM) applications. Through practical exercises, design projects, and real-world case studies, participants developed essential computer-aided design skills and gained valuable exposure to industry-standard design practices. The programme significantly enhanced students' technical proficiency, creativity, and problem-solving abilities while improving their employability and industry readiness, reaffirming the department's commitment to providing skill-oriented, outcome-based engineering education.



Expert Talk on Introduction to Autonomous Vehicles

The Department of Mechanical Engineering, organized an Expert Talk on "Introduction to Autonomous Vehicles" for Mechanical Engineering students to provide insights into the rapidly evolving field of autonomous mobility. The session was delivered by Mr. Aswin Unni, Hyundai Motors, who shared his industry experience and expertise gained through his participation in the SAE ABJA Autonomous Vehicle Competition. The talk introduced participants to the fundamental concepts of autonomous vehicles, covering mechanical systems, control architecture, system integration, and the role of Robot Operating System (ROS) in autonomous vehicle development. The speaker also discussed the advantages and challenges of various communication and control methods, explained real-world engineering solutions for integrating autonomous and manual driving modes, and highlighted the importance of effective project presentation and teamwork in technical competitions. Through practical examples and interactive discussions, participants gained valuable knowledge of emerging automotive technologies, industry practices, and future career opportunities in autonomous systems. The session successfully enhanced students' understanding of intelligent mobility and reinforced the department's commitment to exposing students to cutting-edge developments in automotive engineering.

Academia-Industry Confluence Session on "Next-Gen Oilfield Hazard Mitigation"

The Department of Mechanical Engineering, organized an Academia-Industry Confluence Session on "Next-Gen Oilfield Hazard Mitigation" on 19 July 2025 for Fifth Semester Mechanical Engineering students. The session was delivered by Mr. Harris Thomas, Quantity Surveyor, Insulation Department, Altrad Cape East Ltd., Qatar.

The resource person shared valuable insights into the oil and gas industry, focusing on major operational hazards, safety compliance, risk mitigation strategies, and the importance of industrial safety practices. Through real-life case studies and practical examples, students gained a better understanding of hazard management and career opportunities in the global energy sector.

The interactive session enabled students to clarify their doubts and learn about industry expectations from an experienced professional. Coordinated by Mr. Jackwin Vincent K and Mr. Nithin V K, the program was highly appreciated by the participants and successfully strengthened the connection between academic learning and industrial practice.

Student Enrichment Program on AutoCAD 2D

The Department of Mechanical Engineering, organized a Student Enrichment Program on AutoCAD 2D from 20 to 23 January 2025 at the Third Floor Computer Lab, St. Chavara Block for Second Semester Mechanical Engineering students.

The four-day training program was designed to provide students with a strong foundation in 2D Computer-Aided Design (CAD) using Autodesk AutoCAD, one of the most widely used drafting software packages in the engineering industry. The sessions were handled by Mr. Manoj P. C., Former MEP Coordinator, WS ATKINS, and Mr. Raghu C. V., BIM Engineer, CADCENTER, Kodungallur, who shared their industry expertise and practical knowledge.

The resource persons introduced students to the AutoCAD interface, drawing tools, dimensioning, editing commands, layer management, and engineering drafting standards. Through hands-on exercises and practical assignments, students developed the skills required to create accurate engineering drawings and technical documentation.

The program was coordinated by Dr. Alish James and Mr. Jackwin Vincent K. The training was well received by the participants, significantly enhancing their CAD proficiency and preparing them for advanced design courses and future engineering careers.



Student Enrichment Program on Basic Skill Training

The Department of Mechanical Engineering, organized a Student Enrichment Program on Basic Skill Training from 20 to 23 January 2025 for Mechanical Engineering students. The workshop was conducted with the objective of equipping students with essential practical skills that complement their academic learning and improve their technical competency.

The training sessions were handled by Mr. Reynold Jose (Assistant Professor, Department of Mechanical Engineering), Mr. Joy E. T. (Technical Staff), and Mr. Bejoy Jose (Technical Staff). The program provided hands-on training in basic automobile maintenance and troubleshooting, refrigeration and air-conditioning servicing, plumbing, fitting, and other essential mechanical workshop practices.

Students actively participated in practical sessions, where they learned the safe use of tools, fault diagnosis, maintenance procedures, and basic repair techniques through real-time demonstrations and supervised practice. The workshop emphasized developing problem-solving abilities, technical confidence, and workplace readiness.

Coordinated by Mr. Jackwin Vincent K, the Student Enrichment Program was well received by the participants. The workshop successfully enhanced students' practical skills and reinforced the department's commitment to providing industry-oriented, skill-based education.



Industry Interaction Session: Engineering the Future – Product Development and Beyond

The Department of Mechanical Engineering, organized an Industry Interaction Session titled "Engineering the Future: Product Development and Beyond" on 21 July 2025 for S5 and S7 Mechanical Engineering students.

The session was delivered by Mr. Jayakrishnan T, Engineer – Product Development, Raptee.HV, Chennai, who shared valuable insights into the product development process in the rapidly evolving electric vehicle (EV) industry. He introduced students to modern EV design concepts, the role of mechanical engineers in multidisciplinary product development teams, and the importance of design thinking, rapid prototyping, and product lifecycle management.

Drawing from his industrial experience, the speaker discussed real-world engineering challenges and innovative solutions adopted during product development at Raptee.HV. The session concluded with an interactive Q&A, where students actively engaged with the speaker on topics related to career opportunities, industry expectations, and essential technical skills.

The event was coordinated by Mr. Reynold Jose and Ms. Aswathy P. Sajeew, Department of Mechanical Engineering. The session was highly informative and provided students with valuable exposure to contemporary product development practices, inspiring them to prepare for successful careers in the automotive and manufacturing industries.



ACME'25 – Capstone Project Expo

The Department of Mechanical Engineering, , successfully organized ACME'25 – Capstone Project Expo on 24 March 2025 at the Open Auditorium. The expo showcased the innovative capstone projects of the 2021-25 batch, providing a platform for students to demonstrate their technical knowledge, creativity, and engineering skills.

A total of 10 innovative products were exhibited, reflecting practical solutions to real-world engineering challenges. The projects also resulted in 3 research publications and 3 patent filings, highlighting the department's strong focus on innovation, research, and intellectual property development.

The exhibition attracted students, faculty members, industry professionals, and visitors, who interacted with the project teams and appreciated the practical applications and technical excellence of the exhibits. Participants confidently presented their project concepts, design methodologies, and outcomes, enhancing their communication and presentation skills.

ACME'25 served as an excellent platform for promoting innovation, research culture, and industry-oriented learning among students. The event successfully demonstrated the Department of Mechanical Engineering's commitment to experiential learning and preparing graduates capable of addressing modern engineering challenges.

CADATHON – Design Hackathon

The Department of Mechanical Engineering, in association with the ASME CCE Student Chapter, successfully organized CADATHON – A 12-Hour Sleepless Design Hackathon on 28-29 March 2025 at the CAD Lab. The overnight event challenged students to demonstrate their creativity, technical expertise, and problem-solving skills through 3D modelling and design.

The hackathon witnessed enthusiastic participation from more than 20 students representing different branches and academic batches. Following a brief inaugural session and orientation, participants worked continuously from 6:00 PM to 6:00 AM, designing innovative solutions to real-world engineering problems using advanced CAD software.

Throughout the event, faculty members and mentors provided technical guidance, helping participants refine their concepts and improve the quality of their designs. The hackathon fostered collaboration, innovation, and teamwork while encouraging students to apply engineering principles in a competitive environment.

CADATHON proved to be a highly engaging and enriching experience, strengthening participants' design and modelling skills while promoting innovation, perseverance, and collaborative learning. The event reflected the department's commitment to providing industry-oriented, hands-on learning opportunities beyond the classroom.

Industry Interaction Session: Roadmap to Automotive Product Design Career

The Department of Mechanical Engineering, organized an Industry Interaction Session titled "Roadmap to Automotive Product Design Career" on 29 July 2025 for S5 and S7 Mechanical Engineering students. The session was delivered by Mr. Satish Ullattil, Co-Founder and Technical Consultant, Leameng Solution Technologies, Thrissur and Bengaluru, and was coordinated by Mr. Roshan David.

During the session, Mr. Satish provided valuable insights into the field of automotive product design, highlighting current industry trends, career opportunities, and the skills required to succeed in the sector. He emphasized the importance of mastering industry-standard design software such as CATIA, SolidWorks, and simulation tools, while also discussing the significance of internships, academic projects, and professional certifications. Drawing from his industry experience, he shared practical examples of product development challenges and encouraged students to develop essential soft skills, including communication, teamwork, and leadership.

The session concluded with an engaging interactive discussion, where students actively sought guidance on career planning, skill development, and opportunities in emerging areas such as Electric Vehicles (EVs). The program was highly appreciated by the participants and successfully bridged the gap between academic learning and industry expectations, inspiring students to pursue rewarding careers in automotive product design.

