

# **MECH MATTERS**

**Newsletter January - June 2025**

**Volume 2: Issue 1**

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## **OUR VISION**

To mould socially responsible mechanical engineers and create impact in the society.

## **OUR MISSION**

M1- To provide a strong foundation in mechanical engineering through competent faculties and effective teaching methodologies.

M2- Encourage student's participation in industrial and co-curricular activities that enhances employability skills.

M3- To imbibe students with good leadership qualities and human values through proper mentorship and social outreach.

**MECHANICAL ENGINEERING DEPARTMENT**



**AWH ENGINEERING COLLEGE**  
**KUTTIKKATTOOR, KOZHIKODE - 08**

## **Message from the HOD**

Dear Students, Faculty, and Staff,

It's with immense pride that I present the second edition of our Mechanical Engineering Department newsletter. This past period has been particularly eventful, marking significant milestones and achievements that truly highlight the dedication and talent within our community.

A key highlight is the Memorandum of Understanding (MOU) we've recently signed, which promises exciting new avenues for collaboration and opportunities for our students. We also celebrate the remarkable accomplishment of one of our students, who has successfully completed a minor degree in Computer Science alongside their Mechanical Engineering degree. This exemplifies the interdisciplinary skills crucial for today's engineering landscape.

Furthermore, our faculty and research scholars have been incredibly productive, with six national journal publications demonstrating our commitment to advancing knowledge and contributing to the field.

As the academic year progresses, I want to extend my warmest best wishes to our graduating batch of 2021-25. Your hard work and perseverance have brought you to this significant juncture, and I am confident that you are well-prepared to excel in your future endeavors. We look forward to seeing the incredible impact you'll make in the world.

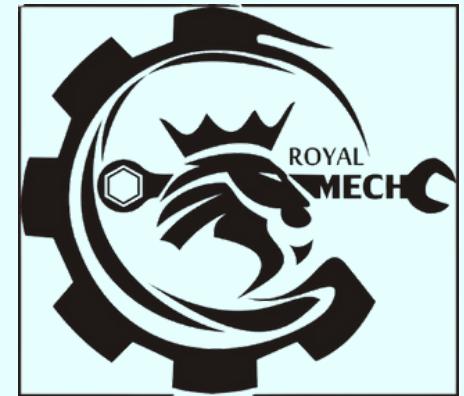
Let's continue to strive for excellence and innovation.

Warm regards,

**Dr. Sreeram D**  
Head of Department, Mechanical Engineering

## MECHANICAL ENGINEERING DEPARTMENT ASSOCIATION

The Association of Royal Mechanical Engineering (ARME) is a student-driven organization within the Department of Mechanical Engineering. It serves as a platform for students to connect, collaborate, and grow within the field of mechanical engineering. ARME strives to organize events, workshops, and seminars that enhance students' academic and professional skills. By fostering teamwork, innovation, and leadership, the association aims to create a vibrant community where students can exchange ideas, gain practical knowledge, and engage in activities that complement their academic journey. It is dedicated to supporting the personal and professional development of its members while creating opportunities for networking and career advancement.



### TEAM MEMBERS

Sl No.	Position	Name	Batch
1	Staff Coordinator	Mr. Abhiram K	
2	President	Mr. Nidhin V K	4th year B.Tech ME
3	Vice President	Mr. Shan Bharath	3rd year B.Tech ME
4	Secretary	Mr. Vyshnav P	4th year B.Tech ME
5	Joint Secretary	Mr. Amridijith K	4th year B.Tech ME
6	Joint Secretary	Mr. Vysak	3rd year B.Tech ME
7	Treasurer	Mr. Sreehari	4th year B.Tech ME
8	Media Lead	Mr. Abhiram S J	4th year B.Tech ME
9	Media Lead	Mr. Sreevishnu	3rd year B.Tech ME
10	Technical Head	Mr. Roshith	3rd year B.Tech ME
11	Technical Head	Mr. Abhinav P	2nd year B.Tech ME

**A DYNAMIC BODY DEDICATED TO FOSTERING A HOLISTIC LEARNING ENVIRONMENT AND PROMOTING THE DIVERSE ASPECTS OF MECHANICAL ENGINEERING AMONG STUDENTS.**

## DEPARTMENT ACTIVITIES

### WORKSHOP ON MOLD DESIGN

The Department of Mechanical Engineering, in association with ARME, conducted a one-day workshop on Mold Design using SolidWorks Software on March 18, 2025. The workshop provided valuable knowledge in mold design, equipping participants with practical insights into the design and manufacturing aspects of molds using industry-standard software.



**AWH ENGINEERING COLLEGE  
KUTTIKKATTOOR, KOZHIKODE -08**

**Workshop on mould design**

**Department of Mechanical Engineering  
In Association with ARME**

Resource person:  
Santhosh.K  
Tool designer

March 18 | Tuesday  
10:30 AM to 4:00 PM

### EXPERT TALK TITLED ON CAE: CHALLENGES AND OPPORTUNITIES

Mr. Anumythery, CAE Analyst Engineer at L&T Technology Services, conducted an expert talk titled “CAE: Challenges and Opportunities” on January 10, 2025. The event was organized in association with ARME.

### EXHIBITIONS

The Association of Royal Mechanical Engineering (ARME) participated in an exhibition at Rahmania School, Calicut, from January 28 to 30, 2025.

AWH Engineering also conducted an exhibition at Moileen Kutty Vaidyar Smarakam, Kondotty, as part of a Shilpashala & Career Guidance session organized by Kondotty Nagarabha on April 15, 2025.

**AWH ENGINEERING COLLEGE  
KUTTIKKATTOOR, KOZHIKODE**

**In Association with ARME**

**Technical Talk**

**CAE: Challenges and opportunities**

10 JAN 2025

2:00 PM ONWARDS

MECHANICAL BLOCK  
AWH ENGINEERING COLLEGE

Speaker  
Anumythery  
2019-23 MIE BATCH AWHEC  
LAT TECHNOLOGY SERVICES  
POSITION-CAE ANALYST ENGINEER

**MECHANICAL ENGINEERING DEPARTMENT**



## ENTE KERALAM EXPO

AWH Engineering College proudly participated in the “Ente Keralam” Expo, held at Kozhikode Beach from May 3rd to 13th, 2025. The event showcased the developmental achievements and initiatives across various sectors in Kerala. Our college highlighted innovative student projects and research contributions, reflecting the technical expertise and creativity of our students and faculty.

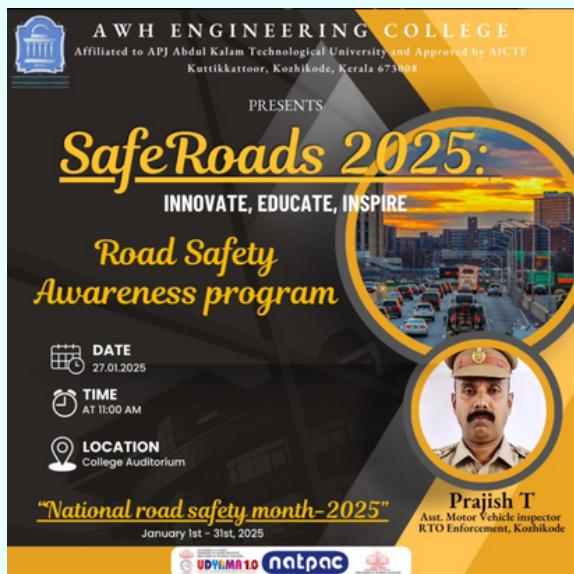


## INTERNATIONAL ANTI-DRUG DAY

“Say No to Drugs” Campaign – International Anti-Drug Day (officially known as the International Day Against Drug Abuse and Illicit Trafficking) AWH Engineering College, in association with the National Service Scheme (NSS) Cell, North Malabar Region, organized a “Say No to Drugs” campaign on June 26, 2025, at Calicut Beach, as part of the International Anti-Drug Day.



## NATIONAL ROAD SAFETY MONTH - 2025.



On January 27, 2025, AWH Engineering College hosted the 'Safe Roads 2025: Road Safety Awareness program' in its College Auditorium. The event, held during National Road Safety Month, featured Asst. Motor Vehicle Inspector Prajish T from RTO Enforcement, Kozhikode, as a key speaker.

The program is part of "National road safety month - 2025.



## BOOTCAMP ON ALLIED TECHNOLOGIES FOR DRONE/UAS

NIELIT Calicut, in collaboration with IEEE Kerala Section, KKEM, ICFOSS, KSUM, and AWH Engineering College, successfully conducted a 'Bootcamp on Allied Technologies for Drone/UAS' at AWH Engineering College from February 18 to 22, 2025, funded by MeitY, Govt. of India.

The comprehensive bootcamp attracted pre-final and final year students, providing them with invaluable insights into the rapidly evolving field of Unmanned Aerial Systems. Key topics covered included Drone Fundamentals, Flying Techniques, Drone Programming, applications of AI/ML in drones, Data Analytics, and more, equipping participants with essential practical and theoretical knowledge.

This collaborative initiative underscores a strong commitment to fostering expertise in cutting-edge technologies and bridging the gap between academic learning and industry demands in the drone sector.



## ANTI-DRUG REPORTING SYSTEM

AWH Engineering College Alumni Association Introduces AI-Powered Anonymous Anti-Drug Reporting System

The AWH Engineering College Alumni Association, in partnership with ZuperAI (AI Partner), MuseON (Technology Partner), IEDC AWH, and NSS (Promotional Partners), has launched an AI-driven Anonymous Anti-Drug Reporting System on campus.

Students can now scan a QR code placed across the college to anonymously report any drug-related concerns. ZuperAI's AI technology will automatically categorize reports based on severity, ensuring a structured and secure response.

This initiative was inaugurated by Shri. M. Sugunan, Deputy Excise Commissioner, Kozhikode, and aims to foster a safe, drug-free campus environment. A final report will be submitted to the concerned government authorities for further action.

## TWO-DAY WORKSHOP ON PYTHON & DATA SCIENCE

The Department of Artificial Intelligence and Data Science (AD) at AWH Engineering College successfully hosted a comprehensive "Two-Day Workshop on Python & Data Science" on March 10 and 11, 2025. The workshop, held from 9:00 AM to 4:00 PM each day, took place in the Common Computing Lab within the Administrative Block.

The insightful sessions were led by Ms. Nihala, a Data Scientist at Softronics, who served as the resource person. The workshop provided attendees with valuable knowledge and practical skills in Python programming and its applications in the rapidly expanding field of Data Science.

This workshop underscores AWH Engineering College's commitment to providing cutting-edge educational opportunities and equipping its students with industry-relevant skills in Artificial Intelligence and Data Science.

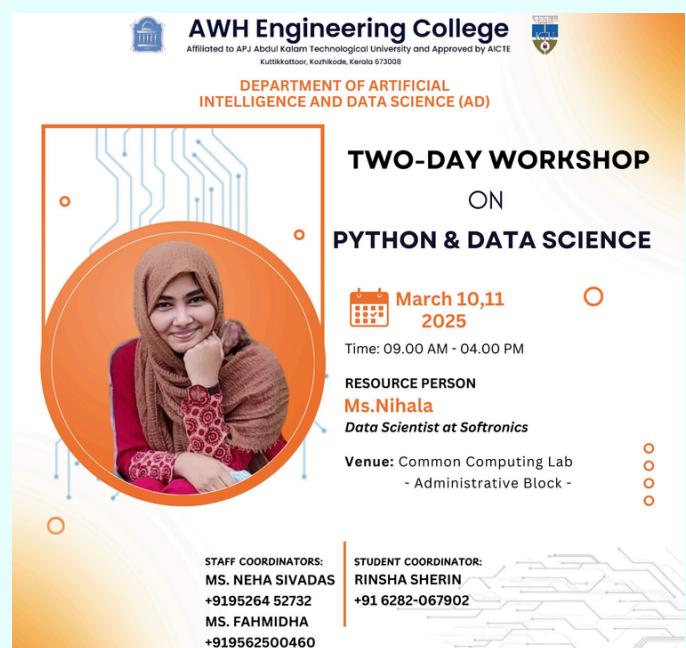


## LIFE & SOFT SKILL TRAINING

AWH Engineering College, in collaboration with Viswasanthi Development Foundation and Unnat Bharat Abhiyan, successfully conducted a "Life & Soft Skill Training" program on March 18, 2025, at 10:00 AM in the College Conference Hall.

The comprehensive program, held under the objective of Project Kalalayam, aimed at recognizing and bridging the skill gap among students, ensuring a smoother transition from traditional academic learning to real-world application.

The event was meticulously coordinated by Mr. Gireesh T K, Staff Coordinator. The initiative reflects AWH Engineering College's commitment to holistic student development, preparing them not just academically but also equipping them with essential life and soft skills vital for professional success.

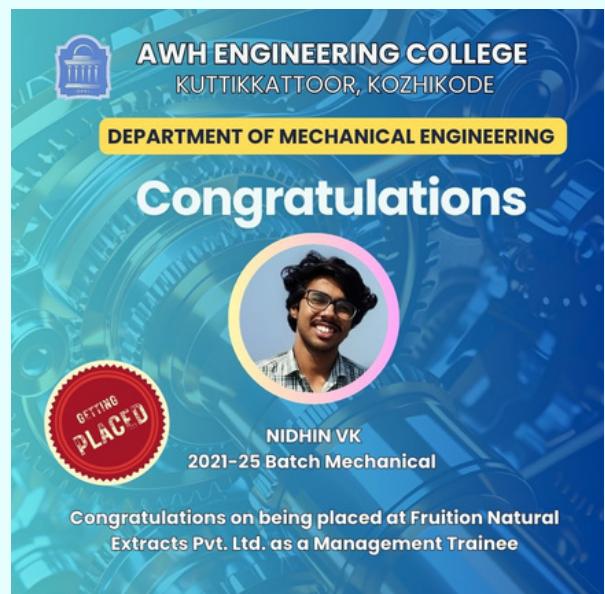


## ACHIEVEMENTS

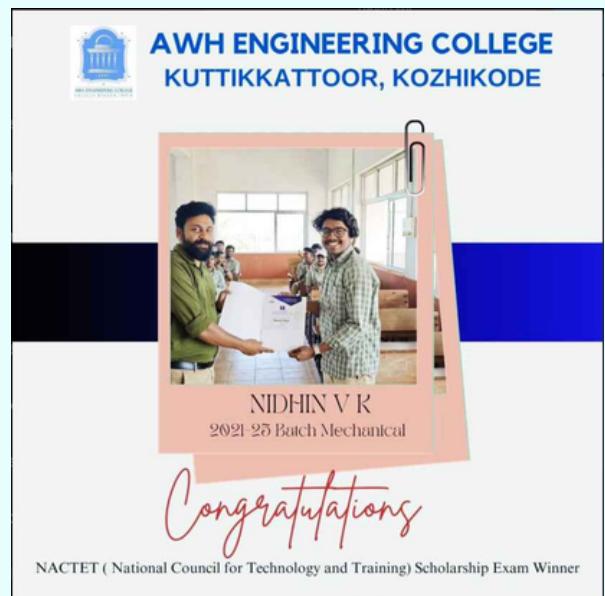
The Department of Mechanical Engineering proudly congratulates Nidhin V K (Batchv2021–2025) for successfully completing his B.Tech in Mechanical Engineering with a Minor in Electronics and Communication Engineering.



Department of Mechanical Engineering Heartfelt Congratulations to Mr. Nidhin V K (2021–2025 Batch) on being placed as a Management Trainee at Fruition Natural Extracts Pvt. Ltd.



Nidhin V R, a student from the 2021-25 Batch of Mechanical Engineering, has been declared a winner of the National Council for Technology and Training (NACTET) Scholarship Exam.

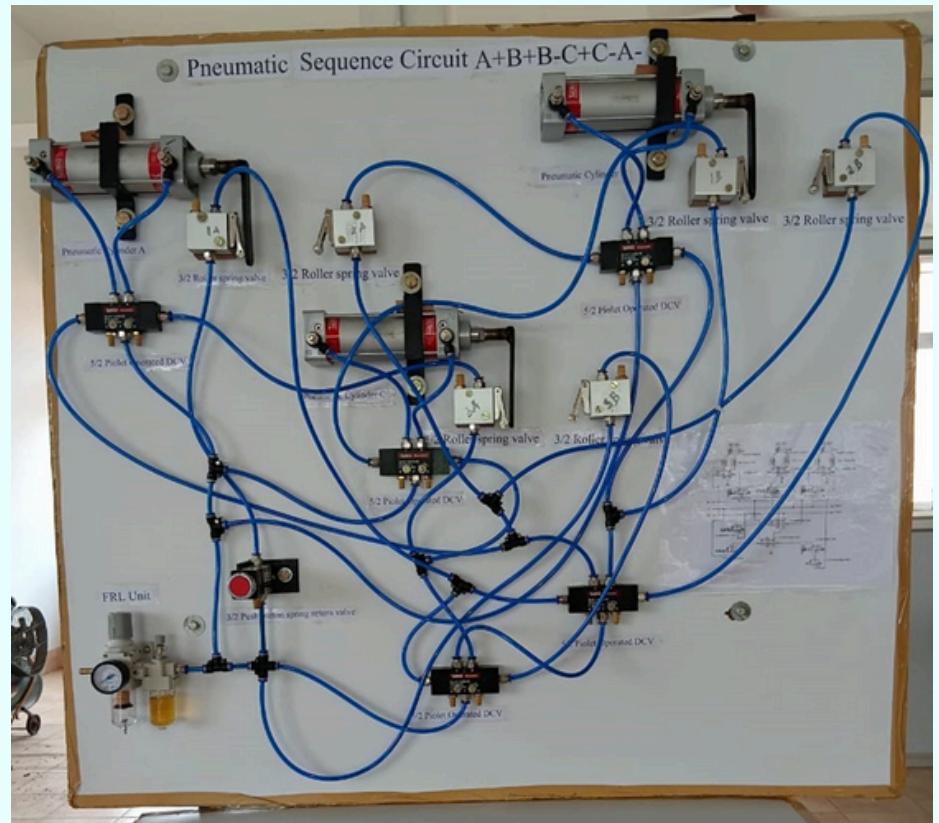


## PROTOTYPE MODEL DEVELOPED

During the academic year 2024-2025, the Mechanical Engineering Department developed a functional prototype model of a pneumatic sequence circuit (A+B+B-C+C-A-). This system has wide applications in multicylinder operations. The pneumatic system consists of multiple actuators used for performing sheet metal operations such as clamping, bending, and forming. In the process, a metal strip is manually placed in a fixture of the bending machine. When a push button is pressed, Cylinder A clamps the metal strip. Cylinder B then initiates the bending operation and retracts, followed by Cylinder C completing the operation. Once Cylinder C returns to its initial position, Cylinder A releases the finished part.

## MOU SIGNED

The Mechanical Engineering Department signed a Memorandum of Understanding (MoU) with Tech Shore Inspection Services on January 31, 2025, during the 2024-2025 academic year. This collaboration aims to enhance students' knowledge and skills in Quality Control (QC), Welding Inspection, Piping, and Pipeline Engineering.



## CONGRATULATIONS! 🎉

We are proud to announce that the Department of Civil Engineering and the Department of Computer Science and Engineering have been granted NBA Accreditation for a period of three academic years — 2025–2026, 2026–2027, and 2027–2028, valid up to 30th June 2028.

This milestone reflects the commitment of both departments to academic excellence, quality education, and continuous improvement.

Hearty congratulations to all faculty members, students, and stakeholders for this remarkable achievement!



### സുപ്രഭാതം



എ.ബി.എ അംഗീകാരം ലഭിച്ച കൂറ്റിക്കാട്ടുർ എ.ഡബ്ല്യൂ.എച്ച്  
എൻജിനീയറിങ്കേബോർഡ്

### എ.ഡബ്ല്യൂ.എച്ച് എൻജിനീയറിങ്കേബോർഡ് എ.ബി.എ അംഗീകാരം

**കോഴിക്കോട്** കൂറ്റിക്കാട്ടുർ  
എ.ഡബ്ല്യൂ.എച്ച് എൻജിനീയറി  
ം കോളേജിന് എം.ബി.എ (നാ  
ഷനൽ ബോർഡ് ഓഫ് അക്കൗണ്ടന്റ്  
യിറേഷൻ) അംഗീകാരം. കം  
പ്യൂട്ടർ സയൻസ് എൻജിനീയ  
റിങ്ക്, സിവിൽ എൻജിനീയറി  
ം എൻജിനീയറിംഗ് മുൻ്ന്  
വർഷത്തെക്കാണ് അംഗീകാ  
രം. ജില്ലയിൽ ഈ അംഗീകാരം  
ലഭിക്കുന്ന ആദ്യ സ്കൂളുകൾ  
കോളേജ് ആണിത്.

ഒരു സ്ഥാപനത്തിലെ അടി  
സ്ഥാന സൗകര്യങ്ങൾ, പാട്ട്  
പാഠ്യത്ര പദ്ധതി, വിഷൻ,  
അധ്യാപക വിദ്യാർഥി നിലവാ

രം, മുന്നുവർഷത്തെ പരിക്ഷാ  
ഫലം, ഗവേഷണം മുതലായ  
വയിൽ തുടർച്ചയായ മുന്നുവർ  
ഷത്തെ നിരന്തരമുല്യനിർണ്ണയ  
ത്തിന്റെ ഭാഗമായാണ് നാശ  
നൽ അതോറിറ്റി ഈ അംഗീ  
കാരം സ്ഥാപനങ്ങൾക്ക് നൽ  
കുന്നത്.

വിദേശരാജ്യങ്ങളിൽ ജോലി  
തെട്ടുന്ന ഉദ്യോഗാർമ്മികൾക്ക്  
ഈ അംഗീകാരം നിർബന്ധ  
മാക്കിയിരുന്നു. ഈ നേട്ടം ജില്ല  
യിലെ സാങ്കേതിക വിദ്യാഭ്യാസ  
രംഗത്ത് മുതൽക്കൂട്ടാകുമെന്ന്  
പ്രിൻസിപ്പൽ ഡോ. എ.വി  
സബീന അറിയിച്ചു.

## JOURNAL PAPER PUBLISHED

- 1.“Developing a Sequential Pneumatic Circuit for Sheet Metal Operations Using Multiple Pneumatic Actuators” International Research Journal of Engineering and Technology (IRJET) Volume: 12 Issue: 03, Mar 2025.
- 2." Evaluation of Mechanical Characteristics and Thermal Stability of PLA-Based Composites Reinforced with Aluminium Oxide and Banana Fiber" international Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET) Volume 14, Issue 4, April 2025.
- 3."Investigation of Mechanical and Thermal Properties of PLA Matrix Natural Fibre Composites using Biochar as an Additive" international Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET) Volume 14, Issue 4, April 2025.
- 4."Comparative Evaluation of Welding Defects in TIG and MIG Joints using Non-Destructive Testing (NDT) Methods" international Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET) Volume 14, Issue 4, April 2025.
- 5."Design and Fabrication of Speed Breaker Electricity Generator" international Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET) Volume 14, Issue 4, April 2025.
- 6."Metallurgical Bonding, Interfacial Chemistry, and Mechanical Optimization of Dissimilar AA7079–AA6063 Welds via Response Surface Methodology" Malaysian Journal of Chemistry, 2025, Vol. 27(3), 543-556 (Special Issue: International Conference on Sustainable Materials and Technologies, ICSMT 2025).

## PASSOUT BATCH 2021–2025 MECHANICAL

### Best Wishes to the Final Year Students (2021–2025 Batch)

The Department of Mechanical Engineering extends its heartfelt wishes to all our final year students of the 2021–2025 batch. As you step into a new chapter of life, may you be blessed with success, good health, and a prosperous future. Continue to pursue your goals with passion and integrity. We are proud of you and wish you all the very best in your journey ahead.

Department of Mechanical Engineering



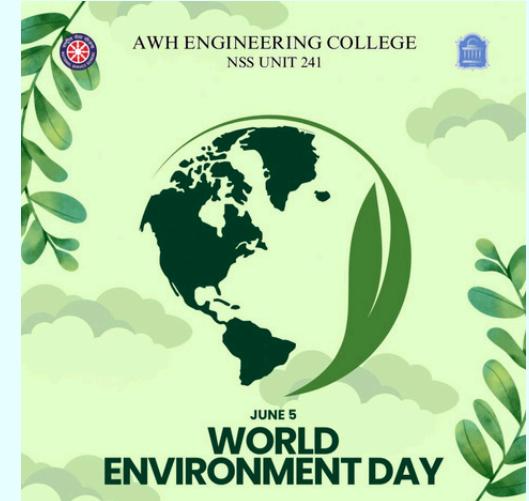
## OTHER PROGRAMS

### ENVIRONMENT DAY CELEBRATION

#### World Environment Day Celebration – NSS Unit 241

The NSS Unit 241 of AWH Engineering College celebrated World Environment Day on June 5, 2025, with great enthusiasm and commitment to environmental sustainability.

The event featured various activities including awareness programs, tree plantation drives, and clean-up campaigns aimed at promoting eco-friendly practices among students and the community.



### SAAYA 2025

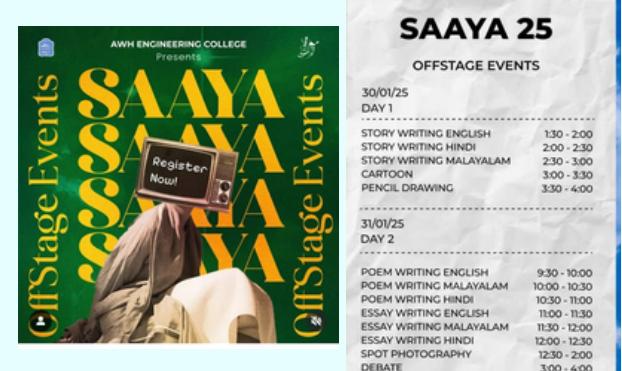
We are thrilled to announce the successful conclusion of Saaya 2025, our annual college arts festival, which showcased an incredible array of talent and creativity! The festival, held over two exciting weekends, brought together students from across disciplines to celebrate the vibrant spirit of art and culture within our college.

The offstage events kicked off on January 30th and 31st, 2025, providing a platform for hidden talents to shine. From captivating literary competitions to intricate artistic displays, the participants demonstrated immense dedication and skill. The air was buzzing with creativity as students engaged in various activities, making the preliminary rounds truly memorable.

The energy then surged as we moved to the onstage events on February 6th and 7th, 2025. The venue stage came alive with spectacular performances, ranging from enthralling musical renditions and graceful dance sequences to powerful dramatic portrayals and hilarious comedic acts. Each performance was a testament to the hard work, passion, and artistic prowess of our students.

Saaya 2025 was not just a competition; it was a celebration of community, collaboration, and the diverse talents that make our college so special. We extend our heartfelt gratitude to all the participants for their enthusiastic involvement, the faculty advisors for their invaluable guidance, and the student organizing committee for their tireless efforts in making this event a grand success.

We look forward to many more such inspiring events and continued artistic excellence in the future!



## CAPE CUP WINNER

The Association of Royal Mechanical Engineers proudly congratulates the Staff Cricket Team for their remarkable victory in the CAPE CUP All Kerala Teachers Cricket Tournament 2025, organized by the College of Engineering Trikaripur. Your dedication, teamwork, and sportsmanship have brought pride to our institution. Wishing you continued success in future tournaments.



## THE JOURNEY CONTINUES

Mechanical engineering is a vast and dynamic field, and the "good wordings" you're looking for will often depend on the context (e.g., academic, professional, marketing, etc.). However, here are some widely used and impactful words and phrases associated with mechanical engineering, categorized for clarity:

### Core Concepts & Principles:

**Design:** Innovation, conceptualization, CAD (Computer-Aided Design), CAE (Computer-Aided Engineering), prototyping, optimization, efficiency, aesthetics, ergonomics, manufacturability (DFM).

**Analysis:** Simulation, modeling, finite element analysis (FEA), computational fluid dynamics (CFD), stress analysis, thermal analysis, vibration analysis, kinematics, dynamics, statics, thermodynamics, fluid mechanics, heat transfer.

**Materials:** Material science, composites, metallurgy, strength of materials, material selection, advanced materials, properties.

**Manufacturing:** Production, fabrication, assembly, automation, robotics, additive manufacturing (3D printing), subtractive manufacturing, machining, quality control, lean manufacturing, process optimization, supply chain.

**Systems:** System integration, control systems, mechatronics, embedded systems, smart systems, interconnected devices (IoT).



## LOOKING AHEAD

The dedication and ingenuity of our faculty and students continue to drive significant advancements in mechanical engineering. As we look ahead, we're excited about the future impact our department will make on industry and society. Thank you for being a vital part of our journey.