

#### **University:**

#### Vision:

We visualize Graphic Era (Deemed to be University) as an internationally recognized, enquiry driven, ethically engaged diverse community, whose members work collaboratively for positive transformation in the world, through leadership in teaching, research and action.

#### Mission:

The mission of the university is to promote learning in true spirit and offer knowledge and skills in order to succeed as professionals. The university aims to distinguish itself as a diverse, socially responsible learning community with high-quality scholarship and academic rigour.

#### **Department:**

#### Vision:

The vision of the department is to be regionally, nationally and internationally recognized in providing Mechanical Engineering education, leading to well qualified Engineers who are Creative, Ethical Environmentally friendly, Self-esteemed and successful in Research.

#### Mission:

The mission of the department is to educate, prepare, inspire, and mentor students to excel as professionals at both the undergraduate and post graduate levels for leadership roles in the fields of mechanical engineering and to conduct research for the benefit of society.

M1- To imparting quality education to the students and enhancing their skills to make them globally competitive engineers.

M2- To maintaining vital, state-of-the-art research facilities to improve its students and faculty with opportunities to create, interpret, apply and disseminate knowledge.

M3- To develop linkages with world class R&D organization and educational institutions in India and abroad for excellence in teaching, research and consultancy practices.

M4- To produce ethical, motivated and competent engineers capable of solving current problems and envisaging and developing new technologies beneficial to society.

1.2 State the Program Educational Objectives (PEOs) (5)

The Program Educational Objectives (PEOs) for Mechanical Engineering students typically center around the broad goals that the program seeks to achieve for its graduates. There are four commonly stated objectives:

PEO1: To enable students to apply core principles and emerging technologies in Mechanical Engineering to address modern industry and societal challenges.

PEO2: To equip students with a strong foundation in core principles and emerging technologies, enabling them to solve complex engineering problems and pursue advanced studies, research, and innovation in Mechanical Engineering.

PEO3: To foster communication, ethics, and leadership in students, enabling them to excel in emerging Mechanical Engineering trends and contribute to industry, society, and science globally.

PEO4: To foster lifelong learning, innovation-driven entrepreneurship, and research in emerging technologies, with a focus on ethics and environmental sustainability for societal benefit.

## Workshop Activities & Topics

Hands-on modules
Thematic exercises
LED binary counter
analogWrite
analogRead
Dimmable LED circuits
PWM (Pulse Width
Modulation)
RGB LEDs
Interactive coding patterns
Circuit-building

#### **Technical Concepts**

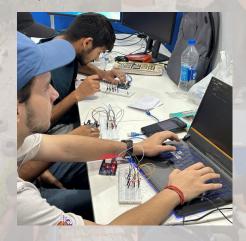
Ohm's Law Serial Monitor Prototyping Data reading Electronics

#### **Learning Approach**

Practical approach
Dynamic sessions
Interactive learning
Outcome-oriented
Theoretical insight
Practical capability

#### **Broader Impact**

Robotics
IoT (Internet of Things)
Automation
Industry-relevant skills
Interdisciplinary learning
Departmental commitment



# Workshop on 'Getting Started with Arduino' Empowers Beginners in Embedded Systems

The Department of Mechanical Engineering at Graphic Era (Deemed to be) University organized a comprehensive five-day workshop titled "Getting Started with Arduino" from 15th to 19th July 2024 at the TVC Lab, aimed at demystifying the realm of electronics and embedded systems for absolute beginners. The workshop was meticulously conducted by Dr. Adhirath Mandal, Assistant Professor, who combined theoretical understanding with practical implementation to create a truly immersive learning experience.

### **AURDINO THE FUTURE**

15-19 July 2024

TATA TECHNOLOGIES Graphic Era

TATA TECHNOLOGIES Graphic Era

TATA TECHNOLOGIES Graphic Era

Targeted at students with no prior exposure to electronics or programming, the workshop served as a foundational platform for exploring the potential of Arduino—a popular open-source microcontroller development platform. Over the span of 20 hours, participants were gradually introduced to a wide array of topics that enabled them to confidently write programs, design circuits, and interface with various hardware components.

The course began with the basics: setting up the Arduino environment and understanding the function of critical components like LEDs, breadboards, and potentiometers. Participants were guided through essential programming concepts such as variables, binary logic, control statements (if, for, while), and serial communication, laying a robust groundwork for hardware-software interaction.

Department of Mechanical Engineering 2024-25

## International Conference on Recent Trends in Materials and Manufacturing Technology with Computational Technologies (ICTTMMTCT-2024)

The two-day conclave served as a dynamic platform for researchers, academicians, industry professionals, and scholars from across the globe to converge and exchange cutting-edge knowledge in the realm of materials science, advanced manufacturing, and computational engineering.

## TECHNOLOGY IN TREND

08-09 August 2024



Under the visionary patronage of Prof. (Dr.) Kamal Ghanshala, President of GEU, and esteemed support from Dr. Vijay Kumar Saraswat (Chancellor), Dr. Rakesh Sharma (Pro-Chancellor), Prof. (Dr.) Narpinder Singh (Vice Chancellor), and Prof. (Dr.) Bhasker Pant (Director, Research), the conference marked a significant milestone in fostering international research collaboration.

The central theme of the conference revolved around emerging materials, nanotechnology, composite membranes, simulation modeling, tribology, fluid systems, thermal engineering, and advanced analysis techniques. With a focus on computational methods in materials development, the event emphasized innovation through simulation, visualization, and design optimization tools, thereby bridging theory and industrial application.

## Conference Themes & Topics

Materials science
Advanced manufacturing
Computational engineering
Emerging materials
Nanotechnology
Composite membranes
Simulation modeling
Tribology
Advanced analysis techniques
Computational methods
Design optimization
Innovation through simulation
& visualization

#### **Conference Activities**

Keynote sessions
Parallel paper presentations
Panel discussions
Virtual expert interactions
Research dissemination

#### Outcomes & Impact

Scopus-indexed AIP
Conference Proceedings
International journal
publications
Over 100 research
submissions
Global academic collaboration
Technological innovation
Academic excellence



#### **Guests & Speakers**

Mr. Mukesh Thakur (Superintendent of Police, Traffic)

Prof. Narinder Singh (Vice Chancellor)

Motorcycling enthusiasts
Students

#### Themes & Focus Areas

Responsible driving behavior
Accident prevention
Safe biking practices
Driving under the influence
Helmet use
Safety gear
Community engagement

#### **Activities & Features**

Interactive sessions
Q&A with traffic experts
Exhibitions (Harley-Davidson
bikes, safety features)
Student participation
Safety ambassador pledge

#### Impact & Vision

Promoting safety and discipline
Youth awareness
Civic sense
Societal transformation
Collaboration
Educational outreach
Social responsibility
Moral duty



व्यातायात जागरूकता अभियान, हार्ले डेविडसन तकनीकी टीम ने सुरक्षा पर दी जानकारी

## Road Safety Awareness Campaign Promotes Responsible Driving Culture

In an impactful stride toward community engagement and civic responsibility, Graphic Era (Deemed to be) University, in collaboration with the Dehradun Traffic Police and the Harley-Davidson Foothill Chapter, successfully conducted a Road Safety Awareness Campaign on 22nd November 2024. The initiative was rooted in a strong commitment to promote road safety, responsible driving behavior, and accident prevention strategies among students and the larger community.

## **SAFTEY FIRST!!**

22 November 2024



Under the visionary patronage of Prof. (Dr.) Kamal Ghanshala, President of GEU, and esteemed support from Dr. Vijay Kumar Saraswat (Chancellor), Dr. Rakesh Sharma (Pro-Chancellor), Prof. (Dr.) Narpinder Singh (Vice Chancellor), and Prof. (Dr.) Bhasker Pant (Director, Research), the conference marked a significant milestone in fostering international research collaboration.

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### **Industrial Visit to Sunfox**

### Technologies: A Glimpse into

### Innovation in Healthcare Technology

Sunfox Technologies is a globally acclaimed startup recognized for its disruptive innovations in healthcare, particularly its flagship product, Spandan—the world's smallest and most portable ECG device. Founded by Er. Rajat Jain, a proud alumnus of Graphic Era, the startup exemplifies the synergy between mechanical design, biomedical application, and digital intelligence.

## **INDUSTRY CONNECTION**

15th February 2025



The visit offered students a unique opportunity to witness firsthand the intersection of mechanical engineering with medical device innovation. Students toured the design and manufacturing facilities, gaining invaluable exposure to processes involved in conceptualizing, prototyping, and commercializing a medical product. They explored the real-world application of core mechanical principles in microelectronics integration, structural casing, sensor alignment, and signal processing within healthcare systems.

What set this visit apart was the entrepreneurial insight shared by the Sunfox team. In a highly interactive session, students learned about the evolution of a startup from ideation to global impact, including the challenges faced in product validation, market entry, and navigating regulatory environments. Discussions also highlighted the startup's collaborative ventures with hospitals and global health organizations, further showcasing how innovative engineering can directly impact lives

## Technical Concepts & Applications

Conceptualization
Prototyping
Commercialization
Microelectronics Integration
Structural Casing
Sensor Alignment
Signal Processing
Core Mechanical Principles

## Entrepreneurship & Innovation

Startup Journey
Ideation to Impact
Product Validation
Market Entry
Regulatory Challenges
Global Health Impact
Collaborative Ventures
Innovation in Engineering

#### Outcomes & Impact

Student Motivation
Skill Development
Interdisciplinary Learning
Career Insight
Social Impact
Engineering Leadership
Real-world Applications



#### **Event Theme & Purpose**

Alumni Session
Industry-Academia Connect
Bridging the Gap
Knowledge Sharing
Career Guidance
Real-world Exposure
Networking Opportunity

#### **Participants**

Alumni
Current Students
Faculty
Industry Experts
Mentors
Career Counselors

#### **Activities & Features**

Guest Talks
Experience Sharing
Panel Discussions
Q&A Sessions
Interactive Dialogue
Soft Skills & Technical Skills

#### **Outcomes & Impact**

Motivation
Practical Knowledge
Professional Networking
Placement Readiness
Industry Relevance
Alumni Engagement
Departmental Growth
Student Empowerment
Lifelong Learning



## **ALUMINI INTERACTIONS**

Mr. Yash Jain

30 November 2024

Mr. Shardul Shandilya

21st May 2025



Alumni play a vital role in shaping the academic and professional journey of students by serving as mentors, role models, and industry connectors. Their real-world experiences and success stories inspire current students to aim higher and navigate their career paths with greater confidence. The Department of Mechanical Engineering at Graphic Era (Deemed to be) University actively fosters this connection by organizing alumni talks, networking sessions, and collaborative projects that bridge the gap between academic learning and industrial practice. By engaging alumni in curriculum enrichment, career guidance, and internship opportunities, the department ensures that students are better prepared to meet the evolving demands of the engineering world.

# Industrial Visit to Rockman Industries: Immersive Exposure to Precision Manufacturing

Rockman Industries, a prominent subsidiary of the Hero Group, is a distinguished name in the Indian auto component sector. Renowned for its specialization in aluminium die casting, precision machining, painted assemblies, auto chains, and alloy wheels, the Haridwar facility exemplifies technological excellence, lean manufacturing, and automation in practice.

## **INDUSTRY CONNECTION**

05 April 2025



The visit commenced with a guided tour of the plant's core facilities. Students witnessed high-pressure and gravity die casting operations, where molten aluminium was skillfully transformed into robust automotive components. The walkthrough also included a detailed demonstration of CNC machining units, highlighting the use of automation and precision tools in shaping intricate parts with impeccable accuracy.

A major highlight was the quality control department, where students observed advanced Coordinate Measuring Machines (CMM) and were introduced to real-time defect detection mechanisms. The assembly line tour offered insight into just-in-time (JIT) workflows, packaging strategies, and material movement within a large-scale industrial setup.

#### **Technical Highlights**

High-Pressure Die Casting
Gravity Die Casting
CNC Machining
Automation
Coordinate Measuring
Machines (CMM)
Real-Time Defect Detection
Quality Control
Just-in-Time (JIT) Workflows

## Industry Trends & Insights

Industry 4.0
Lean Manufacturing
Production Efficiency
Soft Skills
Career Opportunities
Upskilling
Adaptability
Automation Trends

#### **Educational Impact**

Real-world Engineering
Applications
Materials Science
Professionalism
Industry Readiness
Curriculum Integration

## Outcomes & Acknowledgments

Student Engagement
Academic Enrichment
Factory Floor Exposure
Knowledge Sharing
Hospitality Appreciation



## Welding Technologies Discussed

Laser Beam Welding (LBW)
Electron Beam Welding (EBW)
Friction Stir Welding (FSW)
Plasma Arc Welding (PAW)
Hybrid Welding
Robotic Automation
Additive Manufacturing (3D
Printing)
Material-Specific Welding
Welding of Titanium and

#### Quality & Safety Aspects

Non-Destructive Testing (NDT)
Weld Quality
Structural Integrity
Safety Protocols
Global Standards

#### **Industry Applications**

Automotive Construction Renewable Energy Industry 4.0

Composites

#### Learning & Outcomes

Welding Fundamentals
Industrial Case Studies
Skill Requirements
Career Prospects
Future of Welding
Student Engagement
Real-world Applications
Fabrication Technology



# Guest Lecture on Advanced Welding Technology Highlights Industry-Driven Innovations

The Department of Mechanical Engineering at Graphic Era (Deemed to be) University, in collaboration with the Bureau of Indian Standards (BIS), organized an enlightening Guest Lecture on "Advanced Welding Technology" on 25th February 2025. The session aimed at bridging the gap between classroom learning and industry expectations in the field of welding and fabrication.

## **WELDING TECHNOLOGY**



The session began with a refresher on welding fundamentals, laying the groundwork for an in-depth exploration of cutting-edge welding technologies. Mr. Choudhary introduced participants to advanced processes such as Laser Beam Welding (LBW), Electron Beam Welding (EBW), Friction Stir Welding (FSW), and Plasma Arc Welding (PAW). These techniques, known for their precision and application in high-performance industries, were explained with practical illustrations and industrial case studies.

The discussion then pivoted to emerging trends, including hybrid welding, robotic automation, and additive manufacturing (3D printing) using welding. Mr. Choudhary emphasized how these innovations are redefining productivity, safety, and design possibilities across sectors like automotive, aerospace, construction, and renewable energy.

## Tree Plantation Drive: Sowing the Seeds of Sustainability and Social Responsibility

In a powerful expression of environmental stewardship and academic-industry collaboration, the Department of Mechanical Engineering at Graphic Era (Deemed to be) University conducted a vibrant Tree Plantation Drive on 20th April 2025, in association with the Harley-Davidson Owners Group, Dehradun Chapter. Coordinated by Dr. Gagan Bansal and student leader Mr. Anjas Asrani, the drive was part of the university's Earth Week celebrations and a resounding call to action for climate resilience and sustainable development.

## **PLANTATION DRIVE**

20 April 2025



The collaboration with Harley-Davidson—an icon of engineering innovation—added a unique dimension to the event. It represented the alignment industrial excellence with ecological of responsibility. Their active participation illustrated corporations can champion sustainability and inspire young engineers to adopt eco-conscious practices both personally and professionally.

The plantation drive also served as a practical demonstration of how engineering principles can complement environmental objectives. Students gained firsthand experience in ecological restoration while reflecting on how modern engineering must evolve to support green goals. Discussions during the event revolved around sustainable design, eco-friendly manufacturing, and the environmental footprint of technological progress.

## Core Themes & Objectives

Sustainability
Social Responsibility
Environmental Awareness
Ecological Restoration
Biodiversity Conservation
Green Campus Initiatives
Climate Mitigation Strategies
Sustainable Development

#### Activities & Impact

Native Tree Plantation
Air Quality Improvement
Symbolic & Practical Action
Green Engineering
Eco-Conscious Practices
Sustainable Design
Eco-Friendly Manufacturing
Environmental Footprint
Awareness

## Learning & Skill Development

Real-World Relevance
Teamwork
Leadership
Responsible Innovation

#### Outcomes & Vision Environmental Pledge

Ethically Grounded
Engineers
Technological Sustainability
Green Mindset
Hope for a Sustainable
Tomorrow



#### **Event Name & Theme**

Accolade 2025

#### **Cultural & Technical Fest**

**Cultural Events** 

Rangmanch

Shankhnad

**Open Mic Night** 

Stage Plays

Society Reflections

**Emotional Performances** 

#### Music & Dance

Swaragini

Tarang

Swarayudh (Singing)

Nrityotsav (Dance)

Solo and Group Performances

**Musical and Dance Excellence** 

#### **Art & Creativity**

Papertech

Artistein

**Duo Art Swap** 

**Mehndi Moments** 

Painting-Sketching

Crochet Workshop

Crocher Workshop

Digital Art Workshop

#### **Technical Events**

Code Hunt

MCQ Round

**Coding Battles** 

Param Lab

Workshops & Tech Learning

Google Al Workshop

IoT Bootcamp

Al and IoT Development

Hands-on Experience

**Futuristic Tech Skills** 



## A Three-Day Spectacle of Culture, Creativity, Code & Competition at Graphic Era Deemed to be University

Accolade 2025 lit up the Graphic Era Deemed to be University campus with three days of adrenaline-pumping action, artistic brilliance, and technical brilliance. The fest began on 17th April with Ground Events by NSS, where events like Squid Game, Bahubali Push-Ups, Arm Wrestling, Tug of War, Gully Cricket, Chess, and an exhilarating Treasure Hunt turned the main and caravan grounds into arenas of fierce competition.

### **ACCOLADE 2025**

17th to 19th April 2025



As dusk approached, Rangmanch's 'Shankhnad' echoed through the CSIT Seminar Hall with an emotional Open Mic night, followed by riveting Stage Plays on 18th and 19th April that mirrored society's truths and stirred hearts. Swaragini's Tarang brought musical and dance excellence to the K.P. Nautival Auditorium with Swarayudh and Nrityotsav, as solo and group artists competed passionately in singing and dance categories. Creativity soared with Papertech's Artistein, hosting events like Duo Art Swap, Mehndi Moments, and Painting-Sketching contests, alongside enriching workshops on crochet and digital art. IEEE's Code Hunt challenged coders in a high-pressure MCQ round followed by intense coding battles on 19th April at the Param Lab. Finally, TDH's workshops on Google AI and IoT Bootcamp empowered participants with futuristic tech skills and hands-on experience in Al and IoT development. Accolade 2025 truly celebrated talent in every form — from stage to sketchpad, from code to choreography.

## Earth Day 2025 Cleaning Drive: Collective Action for a Cleaner, Greener Future

In celebration of Earth Day 2025, the Department of Mechanical Engineering, in collaboration with the Departments of Humanities & Social Sciences (HSS), NSS, and NCC, spearheaded a dynamic Campus Cleaning Drive on 22nd April 2025. With the inspiring theme "Our Power, Our Planet", the initiative echoed a global call to action for environmental preservation and sustainability.

## **EARTH DAY!!**

22 April 2025



Coordinated by Kapil Kumar Sharma and student leader Mr. Anjas Asrani, the drive witnessed the enthusiastic participation of over 210 individuals, including 110 faculty members and 100 students. The event was also supported by the United Nations Development Programme (UNDP) and the Centre for Public Policy and Good Governance (CPPGG), underlining the institution's commitment to aligning local efforts with global environmental goals.

The objective of the drive was to instill a sense of civic duty, ecological awareness, and personal accountability in every participant. Starting at 7:30 AM, participants were equipped with gloves, eco-friendly bags, and banners as they worked diligently to clean designated areas within and around the university campus. The event not only improved the physical environment but also served as a symbolic and practical demonstration of sustainability in action.

#### **Participants**

210 Total Participants
110 Faculty Members
100 Students

## Core Themes & Objectives

Environmental Preservation
Sustainability
Climate Resilience
Civic Duty
Ecological Awareness
Personal Accountability
Green Initiatives
Community Engagement

#### **Activities & Tools**

Campus Cleanup Eco-Friendly Bags Waste Collection Designated Area Cleaning

#### Learning & Impact

Sustainability in Action
Environmental Ethics
Teamwork & Leadership
Collective Responsibility
Climate Action
Community Building

#### **Outcomes & Vision**

Environmental Pledge
Green Living
Holistic Education
Eco-Conscious Citizenship
Institutional Environmental
Leadership



#### **Core Themes**

Self-Exploration
Personal Development
Emotional Intelligence (EI)
Mindfulness
Visualization
Affirmations
Self-Growth
Self-Awareness
Authenticity
Purpose-Driven Living
Societal Conditioning
Belief Systems

#### **Skills & Tools Discussed**

Goal-Setting
SMART Goals
Growth Mindset
Stress Management
Empathy
Academic Performance
Career Satisfaction
Passion-Driven Careers
Overcoming Self-Doubt
Guided Meditation
Self-Reflection Exercises

#### Outcomes & Impact

Motivation
Introspection
Emotional Maturity
Compassionate Advice
Inner Excellence
Student Empowerment
Holistic Growth
Social Responsibility
Future-Ready Engineers



# Guest Lecture: Achieving Excellence through SelfExploration – A Journey Within

The Department of Mechanical Engineering at Graphic Era (Deemed to be) University organized a deeply reflective and motivational guest lecture titled "Achieving Excellence through Self-Exploration" on 15th May 2025. Conducted by the esteemed Dr. Naveet Arora, the session offered students and faculty members a refreshing perspective on success, self-growth, and emotional intelligence beyond conventional academic parameters.

## **SELF-EXPLORATION**

15 May 2025



The event was coordinated by Kapil kumar Sharma, with the participation of over a dozen faculty members and students from the 2nd, 4th, and 6th semesters, making it a truly inclusive and engaging learning experience.

Dr. Arora captivated the audience by exploring key dimensions of personal development, beginning with the fundamentals of mindfulness, visualization, and affirmations. He encouraged participants to reflect on internal belief systems shaped by upbringing and societal conditioning and guided them to break free from limiting narratives that hinder personal and professional growth.

## RC Car Racing Competition 2025:

## **Accelerating Innovation and**

### **Engineering Excellence**

The Department of Mechanical Engineering at Graphic Era (Deemed to be) University hosted an electrifying RC Car Racing Competition from 1st to 3rd May 2025, transforming the campus into a high-octane arena of creativity, innovation, and applied engineering. The event was coordinated under the expert guidance of faculty members Kapil kuamar Sharma, Dr. Gagan Bansal, and Dr. Adhirath Mandal, and led by a dynamic student team including Mr. Anjas Asrani, Dil Bahadur Bohara, Aryan Gautam, and Avneet Singh.

1st to 3rd May 2025

## **RACING!!**



The core objective of the competition was to blend theoretical knowledge with practical application. Students applied concepts from mechanical design, vehicle dynamics, control systems, electronics, and embedded technology to craft fully functional racing prototypes. The event fostered innovation through the integration of material selection, circuit wiring, drivetrain configuration, and aerodynamics into compact, high-performance RC cars.

Beyond the racetrack, the event provided a unique learning ecosystem. Faculty mentors offered hands-on guidance, ensuring an engaging and technically sound experience. Students were exposed to real-world engineering workflows, including project planning, troubleshooting, team collaboration, and rapid prototyping, mirroring the dynamics of modern automotive and robotics industries.

## Participation & Engagement

1000+ Students
25 Faculty Members
30+ External Enthusiasts
Inclusive Participation
Competitive Environment

## Engineering & Technical Concepts

Mechanical Design Vehicle Dynamics Circuit Wiring Aerodynamics Material Selection Rapid Prototyping

## Skills & Learning Outcomes

Project Planning
Team Collaboration
Troubleshooting
Hands-on Guidance
Real-World Engineering
Workflows

#### Impact & Highlights

High-Performance Prototypes
Applied Engineering
Creativity & Innovation
Industry-Relevant Skills
Holistic Development
Camaraderie
Spirit of Invention
Engineering in Motion



#### **Participation**

600+ Student Participants
25 Faculty Members
30+ External Attendees
Tech Enthusiasts
Interdisciplinary Teams

## Technical Concepts & Skills

Remote-Controlled Combat Robots Structural Design Robot Fabrication Combat Strategy

#### **Learning Outcomes**

Real-World Engineering
Application
Experiential Learning
Interdisciplinary
Collaboration
Precision Engineering

#### Soft Skills Developed

Teamwork
Leadership
Communication
Strategic Planning
Resilience
Time Management

## Career Pathways & Vision

Robotics
Mechatronics
Automation
Competitive Excellence
Student Creativity
Innovation Culture



## Robo War - GRAFEST 2025: Engineering Warfare Meets

**Innovation and Imagination** 

As part of GRAFEST 2025, the Department of Mechanical Engineering at Graphic Era (Deemed to be) University hosted its flagship event, the thrilling Robo War, from 1st to 3rd May 2025. This high-energy competition was the epitome of innovation, blending technical acumen with competitive excitement. Under the faculty leadership of Kapil Kumar Sharma and Dr. Gagan Bansal, and student coordination by Mr. Anjas Asrani, Dil Bahadur Bohara, Aryan Gautam, and Avneet Singh, the event was a testament to student ingenuity and collaborative effort.

## **ROBO-WAR**

1st to 3rd May 2025



The core objective of the event was to provide a real-world platform for applying mechanical engineering principles, including structural design, material optimization, power transmission, actuator control, and systems integration. The robots were built to withstand high-impact collisions, putting students' creativity, problem-solving, and precision to the ultimate test.

Beyond combat, the event fostered interdisciplinary collaboration, bringing together mechanical engineering, electronics, and embedded programming to create robust, intelligent robotic systems. Faculty mentors played a critical role in guiding teams through technical challenges, promoting a collaborative and experiential learning environment.

Participants also honed their project management skills, balancing design iterations, testing, and on-the-fly adjustments. The competition nurtured not only technical talent but also vital soft skills such as teamwork, leadership, communication, and strategic planning

## **TOP PLACEMENTS**







# TRANSFORMING FUTURES WITH TOP-QUALITY PLACEMENTS

Infravision

Graphic Era
Decende to be
University
DE BRADUM



















## STUDENT ACHIEVEMENTS



#### Lakhveer Singh Powers Through Championships

Lakhveer Singh continues to make headlines with his outstanding performances in powerlifting. He bagged 2 gold and 1 silver medals at the state level, 2 gold and 1 bronze in the North Indian Powerlifting Championship, and recently clinched a silver medal in the 93 kg category at the National Powerlifting Championship. His dedication and strength are a source of immense pride for the department.

#### Dil Bahadur Bohara Secures 2nd Position in Robowar

Dil Bahadur Bohara, a final-year Mechanical Engineering student at Graphic Era Deemed to be University, showcased exceptional innovation and technical prowess by securing the 2nd position in a national-level Robowar competition, winning a cash prize of ₹60,000. His remarkable performance reflects the department's strong emphasis on robotics, design, and competitive excellence.





#### Akdas Wins Big in RC Car Racing

Akdas, a talented second-year student from the Department of Mechanical Engineering, made his mark in the RC Car Racing competition, clinching the 2nd prize and a cash award of ₹60,000. His victory underlines the hands-on skill development and competitive spirit nurtured at GEU.

#### Mr. Uttarakhand 2025 - Ayush Rawat

The grand finale of the Himalayan Buzz Mr. Uttarakhand 2025 was a spectacle of grace and talent. Heartiest congratulations to Ayush Rawat from our Mechanical Engineering Department for winning the prestigious title of Mr. Uttarakhand 2025! His victory celebrates not just physical excellence but charisma and confidence too.



## STUDENT ACHIEVEMENTS



#### Archit Saxena Shines at IIT Bombay Internship

Archit Saxena, a dedicated and high-achieving third-year Mechanical Engineering student at Graphic Era Deemed to be University, is currently interning at IIT Bombay. He is contributing to a pioneering project titled "Development of Nano Fuels for Aviation, Missiles, and I.C. Engine Applications," gaining hands-on experience in cutting-edge fuel technologies shaping the future of defense and transportation.

#### Scopus-Indexed Research Publication by Avneet & Gurbani

Second-year Mechanical Engineering students Avneet Singh and Gurbani Kaur have made the department proud with the publication of their first Scopus-indexed research paper. Titled "Evaluating the Potential of Waste Fry Oil Biodiesel Blends for Sustainable Diesel Engine Performance and Emission Reduction," their research explores sustainable energy solutions and engine efficiency—a remarkable achievement at such an early stage in their academic journey.



#### Ansh Bhardwaj Cracks GATE 2025

Kudos to Ansh Bhardwaj for qualifying the GATE 2025 examination—a testament to his perseverance, academic excellence, and technical mastery. His success reflects the department's commitment to nurturing future engineers ready for higher studies and competitive careers in core engineering fields.



#### Pranav Aggarwal Receives International Admission Offer

Congratulations to Pranav Aggarwal (Batch 2021–2025) on receiving an offer for the Master of Engineering in Robotics and Mechatronics Engineering at RMIT University, Melbourne, Australia. His achievement highlights the global recognition of GEU's academic foundation and the international potential of our Mechanical Engineering graduates.



Department of Mechanical Engineering 2024-25

## DEPARTMENTAL PROJECTS



Sustainable Spirituality – Kedarnath Crafted from Paper Waste



Name Boards with Laser
Technology



Electric Conversion of a Non-Functional Motorcycle



The Return of a Legacy: GEU Motorsports



**Rusty the Friendly Junkyard Bot** 



Peace in Paper: Buddha Idol

from Recycled Material

SpineGuard: Exoskeleton for Back Stress Reduction

**Department of Mechanical Engineering 2024-25** 

Founded by Prof. Kamal Ghanshala in 1997, Graphic Era (Deemed to be University) has grow immensely. As the Best University in Dehradun, we offer a high-quality education and a nurturing environment that encourages innovation, fosters critical thinking, and prepares you for the future. To offer a world-class education that focuses on cutting-edge technology, student professional development, critical thinking, and high-quality research. Graphic Era (Deemed to be University), India's premier university, has accomplished countless milestones in its illustrious history thanks to its academic rigor, continuously top-performing students and alumni, and a very strong and competent teaching faculty.

It has been proven beyond reasonable doubt that Graphic Era is among the top-notch universities in India as our University has featured in the Top 100 Universities of India, in the coveted National Institutional Ranking Framework established by the Government of India, for the past five years consecutively, with the rankings growing each year across varied domains.

Graphic Era (Deemed to be University) is located in the lovely and quiet city of Dehradun, tucked in a valley bounded by Rajaji National Park on one side and Clement Town Cantonment on the other. Graphic Era (Deemed to be University), the premier University in Uttakharand, prioritises overall student development.

Editor-in-Chief Kapil Kumar Sharma (HOD/Mechanical Engineering)

**Editorial Team** 

Faculty Editors:

Yatharth Joshi

Paritosh Mishra Anjas Asrani

Student Representatives:

4th Year Representatives:

Shagun Gambhir

Aditya Nagalia

**3rd Year Representatives:** 

Shruti S Khandelwal

Suryansh Yadav

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