



Polyयांत्रिकी



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www.iimtindia.net

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*New is the year, new are the hopes,
new is the resolution, new are the
spirits, and new are my warm wishes
just for you. Have a promising and
fulfilling new year!*

IIMT College of Polytechnic

MANAGEMENT CORNER



Dr. K.K. Paliwal

Group Director

IIMT Group of Colleges

ROLE OF AI IN ENGINEERING FIELD

Artificial Intelligence (AI) plays a significant and growing role in the field of engineering, impacting various aspects of the profession. Here are some key areas where AI is making a notable impact:

- 1. Design and Optimization:** AI can assist engineers in the design process by generating and evaluating numerous design iterations, considering multiple parameters simultaneously.
- 2. Simulation and Modeling:** AI is used to enhance simulation and modeling techniques. Machine learning algorithms can improve the accuracy of simulations by learning from real-world data and adjusting models accordingly.
- 3. Robotics and Automation:** Machine Learning algorithms enable robots to adapt to changing environments, learn from experience, and perform tasks with more precision.

4. Energy Efficiency: AI algorithms are employed to optimize energy consumption in various engineering applications. This includes designing energy-efficient buildings, optimizing power distribution in smart grids, and improving overall energy efficiency in manufacturing processes.

5. Data Analysis and Decision Support: AI aids engineers in analyzing vast amounts of data quickly and making informed decisions. This is particularly beneficial in research and development, where data-driven insights can lead to innovation and breakthroughs.

6. Natural Language Processing (NLP): NLP applications help engineers interact with and extract information from vast technical literature and documentation, facilitating research and development processes.

7. Cyber security in Engineering Systems: AI is employed to enhance the cyber security of engineering systems by identifying and mitigating potential vulnerabilities, ensuring the integrity and confidentiality of sensitive data.

8. Energy Efficiency: AI algorithms are employed to optimize energy consumption in various engineering applications. This includes designing energy-efficient buildings, optimizing power distribution in smart grids, and improving overall energy efficiency in manufacturing processes.

The integration of AI in engineering not only enhances efficiency but also opens up new possibilities for innovation and problem-solving across various engineering disciplines. As technology continues to advance, the role of AI in engineering is likely to expand further.

ACTIVITIES AT A GLANCE



Celebrities at IIMT Group of Colleges



Glimpses of Evolution Expo & Fresher's Party 2K23

TECHNOKRITI-2K23

“TECHNOKRITI-2K23” is a major event organized by the IIMT College of Polytechnic, Greater Noida on 28th November 2023. The coordinators of the event were Mr. Pawan Kumar, Department of MEP, and Mr. Tribhuvan Singh, Department of MEM. This technical event consisted of 10 activities as shown in creative like- Machining, Auto CAD, Engineering Drawing, Circuit Making, Bridge Making, Poster Making, Technical Quiz, Carpentry, Best Out of Waste, and Gully Cricket. In this event, more than 230 participants took part in different activities.

IIMT
COLLEGE OF POLYTECHNIC
Greater Noida
— Aim For Excellence —

Proudly Presents
TECHNOKRITI - 2K23
TUESDAY, 28th NOVEMBER, 2023

EVENTS
Attractive Prizes

1. Machining
2. Auto CAD
3. Engineering Drawing
4. Circuit Making
5. Bridge Making
6. Poster Making
7. Technical Quiz
8. Carpentry
9. Best Out of Waste
10. Gully Cricket

EVENT COORDINATORS
Mr. Pawan Kumar - 8743543159, Mr. Tribhuvan Singh - 9999260048

Scan for Registration **Scan for Payment**

ENTRY FROM GATE NO. 03
10:00 AM Onwards

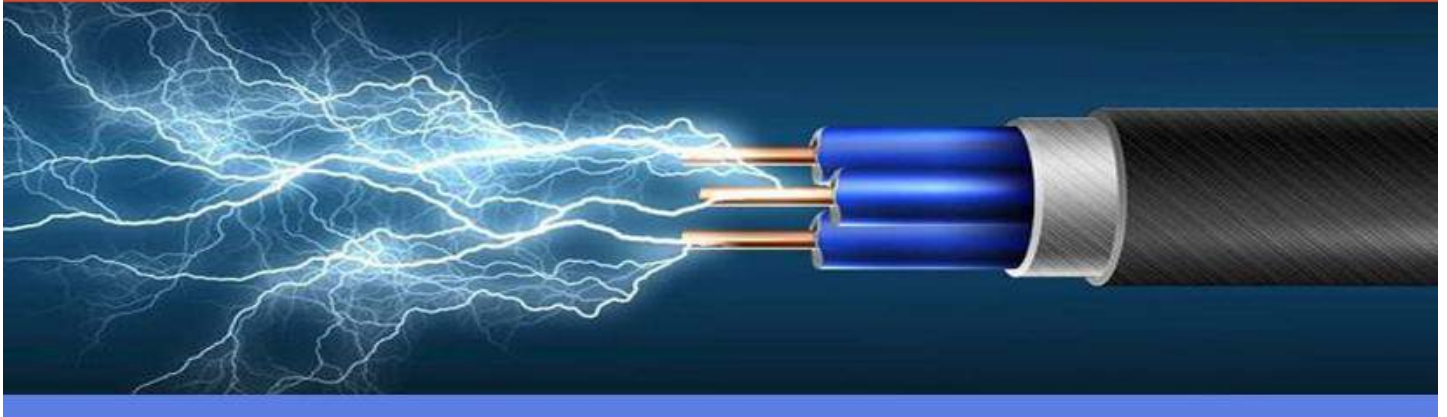
VENUE: IIMT COLLEGE OF POLYTECHNIC, PLOT NO. 19 & 20, KNOWLEDGE PARK - II, GREATER NOIDA - 201310

FACULTY COORDINATORS	
Mr. Anand Kumar (MEP)	Machining
Mr. Manoj Kumar (MEM)	Gully Cricket
Mr. Mohan Kumar (MEM)	Circuit Making
Mr. Prakash Kumar Sharma (MEM)	Auto CAD
Mr. Rakesh Kumar (MEM)	Engineering Drawing
Mr. Manoj Kumar (MEM)	Bridge Making
Mr. Manoj Kumar (MEM)	Poster Making
Mr. Anil Kumar (MEM)	Technical Quiz
Mr. Rakesh Kumar (MEM)	Carpentry
Mr. Mohan Kumar (MEM)	Best Out of Waste



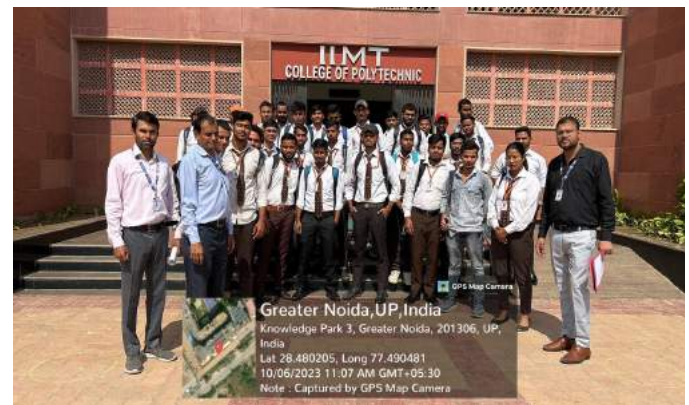
Memento presented to the Chief Guest, Dr. Kaurna Bhalla

Department of Electrical Engineering

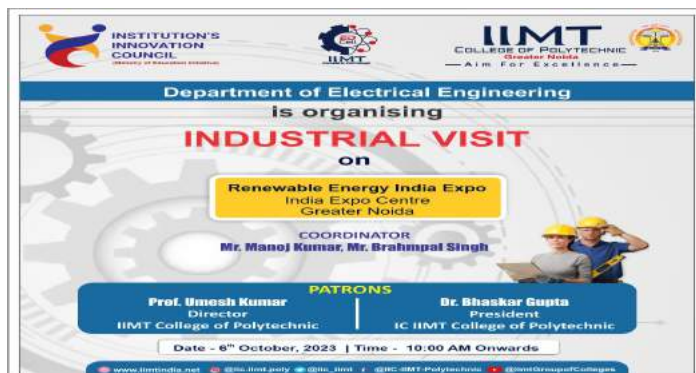


INDUSTRIAL VISIT

The Department of Electrical Engineering organized an “Industrial Visit” for a one-day visit to Renewable Energy India Expo, Centre Greater Noida on 6th October 2023 for IInd and IIIrd year EE students. The coordinators were: Mr. Manoj Kumar and Mr. Brahmopal Singh. The main objective of this visit was to allow students to understand various processes involved in the maintenance, manufacturing, and fabrication of protection Devices.



Industrial Visit of EE students at India Expo Centre, Greater Noida



GUEST LECTURE ON NEW TRENDS IN ELECTRICAL ENGINEERING

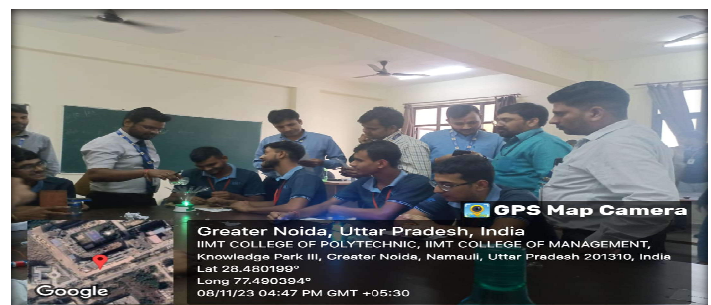
A one-day Guest lecture on “New Trends in Electrical Engineering” was organized for the students of EE on 3rd November 2023. The speaker invited on this occasion was Dr. O.V. Singh, Additional Director, Department of EE, Gautam Buddha University (GBU) India, Greater Noida who delivered a lecture and shared his knowledge about recent technological advancements and opportunities in the field of electrical engineering.



Faculties & Students attended the Guest Lecture on New Trends in Electrical Engineering

DIWALI TECHNO INNOVATION

A minor activity named as “DIWALI TECHNO INNOVATION” was conducted for the students of Electrical Engineering on the occasion of Diwali. The coordinator of the event was Mr. Mirtunjay Kumar [Lecturer, EE]. This event was organized for the evaluation of student’s basic knowledge of electrical and electronic circuits. The winners of the event were Saniya Parveen, Md. Taufeeq Alam, Atal Vihari, Aryan Kumar, Muneesh Ku. Sharma, Ravi Yadav and many more. The outcome of this activity was that; students learnt to design the basic electrical and electronic circuits.



Students learnt to design the Electrical & Electronic circuits

Department of Civil Engineering



FUN WITH BALL EXTRAVAGANZA

“Fun with Ball Extravaganza” is a vibrant and inclusive event designed to create a joyous atmosphere through a diverse range of ball games. Whether you're a sports enthusiast, a casual player, or someone looking for a day of family-friendly fun, this event promises an exciting experience for all. This activity was conducted by the Department of Civil Engineering on October 3, 2023. The Co-ordinator of this minor activity was Mr. Tanmay Gupta (Lecturer CE Department).



Students' showcased their talents during the activity conduction

WORKSHOP ON AUTOCAD, PRIMAVERA, STAADPro

Department of Civil Engineering has arranged a workshop on “AUTOCAD, STAAD Pro & Revit Software” on October 4, 2023. The Expert of the workshop was Mr Rajiv Sharma who is corporate civil trainer, at CETPA InfoTech Pvt. Ltd. The Co-ordinator of the event was Mr. Manish Kumar (Lecturer CE Department). This Workshop was divided into two parts; theory and hands-on practice. In this workshop, students learnt different commands used in Auto CAD 2D, 3D and Revit software’s.



Faculties and Students’ attended the workshop on
AUTOCAD, PRIMAVERA, STAADPro

ALUMNI CONNECT ON SCOPE OF CIVIL ENGINEERING AFTER DIPLOMA

On Tuesday, 1st November 2023, alumni connect on “Scope of Civil Engineering After Diploma” was organized by the CE department of IIMT College of Polytechnic, Greater Noida under “Alumni Cell IIMT” to encourage the students for their future endeavours. The coordinator of the event was Mr. Vikash Kumar Gautam (Dy. HOD CE Department) and the speaker of the event was Ms. Samiksha who works as a Full Stack Developer in the Netcoreinfo Business Group. It was an inspirational and interactive talk between students and alumni.



Guest Speaker, Ms. Samiksha in Alumni Connect

Department of Mechanical Engineering



GUEST LECTURE ON ENTREPRENEURSHIP SKILL DEVELOPMENT AMONG STUDENTS

A Guest Lecture “on entrepreneurship skill development among students” was organized by the Mechanical Engineering Department on 10th October 2023. The speaker of the Lecture was Mr. Keerti Singh, Director, RRS Educational Foundation. The coordinator involved in the arrangement of this guest lecture was Mr. Sachin Kumar [Lecturer, ME-P].

The main objective of conducting this program was to make the students aware of the needs and demands of the current educational system. Therefore, entrepreneurial skill development is also necessary if one wants to pursue his/her career in entrepreneurship.



Faculties and students attended the Workshop on Entrepreneurship Skill Development Among Students

INDUSTRIAL VISIT

The department of Mechanical Engineering arranged an “Industrial Visit” for the students on November 7, 2023. The coordinator who was involved in scheduling this visit was Mrs. Nishu Sharma, (Lecturer) Mechanical Engineering (Production). The objective of this industrial visit to Clearpack Automation Pvt. Ltd. was to gain practical insights into the field of industrial automation and packaging technology. The visit aimed to provide students with a real-world perspective on how automation solutions are employed in the packaging industry.



**Industrial Visit of ME Students at
CLEARPACK AUTOMATION PVT. LTD**

WORKSHOP ON SOLID WORKS & ANSYS

The department of Mechanical Engineering has organised a Workshop on “Solid Works and Ansys” on October 5, 2023. The coordinator of this workshop was Mr. Sachin Shishodia, The Main objective of this workshop was to make the students familiar with Designing Software user interface. This workshop provide the exposure to the students with state of the art perspectives, ideas, concepts, and solutions related to the design, These kind of workshop proved to be very fruitful to the students.



Memento presented to Guest Speaker, Mr. Naresh Bhagat

FACULTY CORNER

GREEN
CONCRETE

**Mr. Vikash
Kumar Gautam**

**Dy. HOD
,Department of Civil
Engineering**

Concrete, a staple in the construction industry, has long been associated with strength and durability. However, traditional concrete production comes with a hefty environmental cost, contributing significantly to carbon emissions and depletion of natural resources. In response to these challenges, the construction industry is turning towards a more sustainable alternative - Green Concrete. This innovative material is revolutionizing the way we build, offering a greener and more environmentally friendly solution.

What is Green Concrete? Green concrete, also known as eco-friendly or sustainable concrete, is a type of concrete that prioritizes environmental responsibility throughout its life cycle. This includes the sourcing of raw materials, the manufacturing process, and the impact on the environment during and after construction. The primary goals of green concrete are to reduce carbon emissions, minimize resource depletion, and enhance overall sustainability.

Alternative Cementitious Materials: Traditional concrete relies heavily on Portland cement, a major contributor to carbon dioxide emissions. Green concrete incorporates alternative cementitious materials such as fly ash, slag, and silica fume. These by-products of industrial processes not only reduce the carbon footprint but also utilize waste materials effectively.

Recycled Aggregates: Green concrete often incorporates recycled aggregates, such as crushed concrete and reclaimed asphalt pavement, in place of traditional virgin aggregates. This reduces the demand for natural resources and diverts waste from landfills.

Low-Carbon Technologies: Manufacturers are adopting low-carbon technologies in the production of green concrete. This includes energy-efficient kilns, carbon capture and storage systems, and renewable energy sources, all aimed at minimizing the environmental impact of concrete production.

Optimized Mix Designs: Green concrete utilizes optimized mix designs that reduce the overall amount of cement needed. This not only lowers the embodied carbon in the concrete but also enhances its performance and durability.

Through the incorporation of alternative materials, optimized mix designs, and eco-friendly manufacturing processes, green concrete stands as a testament to the industry's commitment to a more sustainable and environmentally responsible future.

STUDENT CORNER



RECYCLED CONCRETE

Vinita Kumari

CE IIIrd year

Introduction: Concrete is one of the most widely used construction materials, but its production has long been associated with significant environmental impacts. As the construction industry seeks sustainable alternatives, recycled concrete has emerged as a promising solution. Recycling concrete involves the breaking down of demolished or unused concrete structures into aggregates, which can be reused in new construction.

Environmental Benefits:

Reduced Carbon Footprint: Traditional concrete production is energy-intensive and contributes significantly to carbon emissions. Recycling concrete conserves energy and reduces the overall carbon footprint, making it a more environmentally friendly option.

Resource Conservation: The use of recycled aggregates helps preserve natural resources, as it minimizes the need for extracting new materials from quarries.

Waste Reduction: Recycling concrete diverts construction and demolition waste from landfills, addressing the growing concern of waste management in urban areas.

Applications in Construction: The versatility of recycled concrete extends to a wide range of construction applications: Recycled concrete can be used in load-bearing components such as beams and columns, contributing to the structural integrity of buildings.

GENERAL CORNER

Find the Mistake: You are a genius if you can find the mistake in the park picture in 7 seconds!

Spot the mistake in 5 seconds



Source: www.jagranjosh.com

Answers of previous newsletter general corner (Jul-Sep'2023)



Source: www.jagranjosh.com





FROM THE

**EDITOR'S
DESK****Dear Readers,**

This thanks of note goes to all the contributors like Prof in Charge Academics, Prof In Charge R&D, HoD's - Electrical, Mechanical, Civil, Event Coordinators, Faculty and students those who have contributed their articles to make this Newsletter complete. At the last but not least thanking to Director Sir for his guidance, vision and time.

CHIEF EDITOR**Prof. Umesh Kumar**

Director

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CE 3Yr