

## SWAMI VIVEKANAND INSTITUTE OF ENGINEERING & TECHNOLOGY

Approved by AICTE, New Delhi and Affiliated to IKGPTU, Jalandhar

### Expert Talk on Latest Trends in Civil Engineering

**Organizer's Name:** Department of Civil Engineering

**Coordinator:** Er. Kaushik Bharti

**Date:** 12<sup>th</sup> March 2025

**Venue:** SVIET, Seminar Hall (Block C)

#### **Introduction of the Event:**

An expert talk on the “*Latest Trends in Civil Engineering*” was organized on **12<sup>th</sup> March 2025** at SVIET, Seminar Hall (Block C) by the **Department of Civil Engineering**. The session was conducted by **Dr. Amit Goyal**, Assistant Professor at **NITTTR, Chandigarh**, who is a renowned academician and researcher in the field of civil engineering. The event aimed to provide students and faculty members with insights into the emerging trends and advancements shaping the future of civil engineering.

#### **The primary objective of the expert talk was to:**

- Familiarize students with the latest innovations and practices in civil engineering.
- Enhance understanding of modern construction techniques and materials.
- Encourage students to explore research opportunities and technological applications in civil engineering

#### **Welcome and Introduction**

- The event commenced with a warm welcome by **Er. Ifrah**, who introduced the esteemed speaker **Dr. Amit Goyal**. Er. Ifrah highlighted Dr. Goyal's remarkable academic background and professional achievements, emphasizing his expertise in sustainable construction, smart infrastructure, and innovative engineering practices. The introduction set a positive tone for the session, building anticipation among the attendees.

### **Key Highlights**

#### **Introduction to Latest Trends**

Dr. Amit Goyal began the session by providing an overview of how civil engineering has evolved over the years, highlighting key advancements in design, materials, and construction techniques.

#### **Advanced Construction Materials**

- Use of self-healing concrete and geopolymer concrete.
- Development of high-performance and sustainable materials.
- Application of nanotechnology in improving material properties.

#### **Smart Infrastructure and Sustainable Development**

- Integration of smart sensors and IoT in infrastructure for real-time monitoring.
- Green building concepts and energy-efficient structures.
- Importance of adopting eco-friendly practices in construction.

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### Use of Technology in Civil Engineering

- Application of Building Information Modeling (BIM) in project planning and execution.
- Use of Artificial Intelligence (AI) and Machine Learning (ML) in predictive analysis and decision-making.
- Role of Geographic Information Systems (GIS) in urban planning and disaster management.

### Challenges and Future Prospects

- Addressing the challenges of urbanization and population growth.
- Need for resilient infrastructure to withstand climate change and natural disasters.
- Encouraging innovation and research to meet future demands.

### Interactive Session

Following the presentation, a Q&A session was held where students and faculty members engaged with Dr. Amit Goyal on various topics such as the application of AI in structural analysis, use of sustainable materials, and career opportunities in emerging fields of civil engineering.

### Conclusion

The expert talk by **Dr. Amit Goyal** was highly informative and well-received by the attendees. It provided valuable insights into the latest trends and future challenges in civil engineering. The session motivated students to explore research and innovative solutions in the field. The Department of Civil Engineering expressed gratitude to Dr. Goyal for sharing his expertise and inspiring the next generation of civil engineers.

### INSIDES FROM THE EVENTS



*Welcoming Dr Amit Goyal, presented with a floral bouquet*

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*Dr. Amit Goyal interacts with students and faculty*



*A token of appreciation was presented to the guest*

### Key Outcomes

- Enhanced awareness about new technologies and practices in civil engineering.
- Increased interest among students in pursuing research and innovation.
- Strengthened industry-academic collaboration for future projects.



Er. Yasir Hussain  
Faculty In-charge



Ms. Shivani Guleria  
Head of Department