

Office of Dean of Sustainability
Thapar Institute of Engineering & Technology
(Deemed to be University)
Patiala – 147004 INDIA

Activity: Sustainability Awareness Lecture

Topic: Shaping Sustainable Futures: Engaging Students through Impactful Teaching Pedagogical Strategies

Speaker: Dr. Abhinay Kumar, Sustainability Coordinator, Assistant Professor, Civil Engineering Department, TIET

Location: LT-201, TIET

Date: 30 October 2025, Thursday

On **30 October 2025, Thursday**, the Office of the Dean of Sustainability, TIET, successfully organized an interactive and insightful lecture on “**Shaping Sustainable Futures: Engaging Students through Impactful Teaching Pedagogical Strategies**”. The session aimed to equip faculty and students with practical, evidence-based teaching and learning methods—especially hands-on, water/environment activities—to design outcome-aligned instruction that builds skills for real-world sustainability challenges. This lecture integrated sustainability and pedagogy to enhance engineering education, tailored for faculty and students alike. Participants explored effective strategies for teaching sustainability concepts, focusing on water and environmental concepts, including engaging hands-on sessions and simple classroom demonstrations. The session witnessed an enthusiastic participation of **faculty members, researchers, and students** from various disciplines. Total 150 and above had actively attended the lecture and engaged in discussions.

Key Highlights of the Lecture:

Dr. Abhinay Kumar, the speaker, provided a comprehensive overview of:

1. **Integrating sustainability with engineering education:** Exploring how sustainability principles can be embedded into engineering curricula to prepare responsible future professionals.
2. **Understanding diverse learning perspectives:** Examining how students and teachers perceive learning differently and how constructive alignment bridges this gap.
3. **Adapting to varied learning styles:** Emphasizing the need to align teaching strategies with active, sensory, and visual learning preferences for better engagement.
4. **Cultivating creativity and critical thinking:** Encouraging innovative and analytical problem-solving through real-world sustainability challenges and reflective activities.
5. **Engaging through experiential pedagogy:** Showcasing hands-on demonstrations, interactive polls, and field-based learning to strengthen understanding of water and environmental concepts.

Key Takeaways:

- Constructive alignment links outcomes, activities, and assessments to deepen understanding.
- Matching teaching to learning styles significantly increases engagement and retention.
- Real-world, hands-on sustainability tasks build transferable problem-solving skills.
- Encourage creativity first, then evaluate options with critical, evidence-based reasoning.
- Simple demonstrations and interactive polls make complex concepts immediately accessible.

Photographs of the Event:





Conclusions:

The lecture provided a blueprint for sustainability teaching that is outcome-aligned, activity-driven, and responsive to learner diversity. By pairing creative and critical thinking with simple demonstrations, interactive polls, and real-world water and environmental tasks, it showed how to move students from passive listeners to engaged problem-solvers. Constructive alignment connected goals, activities, and assessment, while experiential strategies strengthened motivation and transferable skills. Together, these practices enable evidence-based, resilient pedagogy in engineering classrooms committed to sustainability.

(Kulbir Singh & Anoop Verma)
Associate Dean Sustainability

(Rafat Siddique)
Dean Sustainability