

Workshop on Design Thinking & Critical Thinking

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The Design Thinking & Critical Thinking Workshop was organized at ICFAI University, Sikkim, to provide an in-depth exploration of structured, human-centered problem-solving approaches that foster creativity, collaboration, and iterative learning. Initially rooted in design and engineering, Design Thinking has now expanded its applications to various industries, including business, healthcare, and education

The session was conducted by **Dr. Durgesh Nandan**, who holds a **Ph.D. in Electronics & Communication Engineering** from **Jaypee University of Engineering and Technology, Guna, Madhya Pradesh (2018)**, with a specialization in **VLSI**. He was awarded the prestigious **JSS Fellowship (2014-2018)** and recognized with the **"Young Personality of the Year Award (Below 40 years)"** in 2019 by the **International Academic and Research Excellence Awards (IARE-2019)**. His contributions to **VLSI & DSP** also earned him the **I2OR Preminent Researcher Award (2019)**, and he was honored with **IEEE Senior Membership (2020)** for his remarkable achievements.

Key Highlights of the Workshop:

The session primarily focused on the role of Design Thinking in solving complex challenges using structured innovation frameworks. The discussion highlighted real-world applications by companies like Apple, Google, and IDEO, demonstrating how Design Thinking is widely used for product design, healthcare advancements, and service innovations.

The workshop covered the five key stages of Design Thinking:

- Empathize – Understanding users' needs through research and observation.
- Define – Clearly identifying the problem statement based on insights.
- Ideate – Brainstorming and generating multiple innovative solutions.
- Prototype – Creating models or drafts to visualize ideas.
- Test – Evaluating the prototype to refine and improve solutions.

The session also introduced different methodologies, such as Stanford d.school's model, IDEO's approach, and IBM's Observe-Reflect-Make framework. Practical techniques, including brainstorming, empathy mapping, affinity diagrams, and usability testing, were demonstrated to show their effectiveness in real-world scenarios. Additionally, the theoretical foundations of Design Thinking were discussed, incorporating insights from Human-Centered Design (HCD), Cognitive Psychology, and Behavioral Science. The contributions of scholars like Herbert Simon, Donald Norman, and Tim Brown were also acknowledged in shaping the principles of Design Thinking.

The workshop concluded by emphasizing that Design Thinking is more than just a methodology—it is a mindset. Its effectiveness increases with continuous practice and real-world applications, making it an essential tool for driving innovation across industries. Participants left the session with a deeper understanding of how Design Thinking fosters problem-solving, enhances creativity, and enables a structured approach to innovation. The event was highly insightful and provided valuable knowledge to all attendees, equipping them with tools and strategies to apply Design Thinking principles in their respective fields.