# Report on the Seminar "Industry 4.0 – A Seminar on Additive Manufacturing"

The **Institution's Innovation Council (IIC)** and EEE,MECH departments of **Sreenivasa Institute of Technology and Management Studies (SITAMS)** successfully conducted a highly informative seminar on *Industry 4.0 – Additive Manufacturing* on **30th January 2025**, from **10:00 AM to 1:00 PM**. The seminar aimed to enlighten students, faculty, and industry professionals about the advancements in **additive manufacturing**, an essential aspect of **Industry 4.0**, which is revolutionizing modern engineering and industrial applications.

**Objective of the Seminar**

The primary objective of the seminar was to **bridge the knowledge gap** between traditional manufacturing processes and the emerging technologies of Industry 4.0, particularly **additive manufacturing (AM)**, commonly known as **3D printing**. The session was designed to:

- Provide an overview of **additive manufacturing techniques** and their **applications** in various industries.
- Explain the **latest innovations** and **trends** in Industry 4.0.
- Highlight the significance of **automation, digital manufacturing, and smart production**.
- Discuss **career opportunities** and research potential in this field.

**Keynote Speaker and Expert Insights**

The session was conducted by **Mr. Jambeswar Sahu**, **Associate Professor, School of Mechanical Engineering, VIT University, Vellore**, who is an expert in advanced manufacturing technologies. He provided **detailed insights** into the **principles, processes, and future scope of additive manufacturing**. Some key areas covered during his presentation were:

- **Introduction to Additive Manufacturing:** The evolution from traditional **subtractive** manufacturing to **additive** processes.

- **Types of 3D Printing Technologies:** Fused Deposition Modeling (FDM), Selective Laser Sintering (SLS), Stereolithography (SLA), and Direct Metal Laser Sintering (DMLS).
- **Materials Used in 3D Printing:** Polymers, metals, ceramics, and composite materials.
- **Applications in Various Industries:** Aerospace, automotive, healthcare (prosthetics and implants), construction, and consumer goods.
- **Challenges and Future Prospects:** Scalability, cost-effectiveness, and sustainability of additive manufacturing.

Mr. Sahu also emphasized the role of **artificial intelligence (AI) and the Internet of Things (IoT) in smart manufacturing**, highlighting how companies are integrating these technologies to improve efficiency and productivity.

**Event Coordination and Participation**

The seminar was efficiently coordinated by **Dr. P. Sudheer (HOD-EEE)** and **Mr. Satheesh Kumar (HOD-MECH)**, along with the dedicated support of **Mrs. B.K. Shalini (Asst. Prof., EEE)** and **Mr. M. Yugandhar (Asst. Prof., MECH)**. Their efforts ensured smooth planning and execution of the event.

The seminar witnessed **enthusiastic participation** from **students, faculty members, and researchers** across multiple engineering disciplines. Attendees actively engaged in discussions, and the interactive **Q&A session** allowed them to clarify doubts, discuss research ideas, and explore potential **career opportunities** in Industry 4.0 and additive manufacturing.

**Impact and Conclusion**

The seminar was a **resounding success**, providing participants with **valuable insights and practical knowledge** about **emerging trends in smart manufacturing**. It helped students understand **how additive manufacturing is transforming industries** and how they can align their skills to meet future industry demands.

Participants **expressed their appreciation** for the engaging and informative session, acknowledging that it broadened their perspective on **advanced manufacturing techniques**.

The Institution's Innovation Council (IIC) at SITAMS continues to foster **research, innovation, and industry collaboration** by organizing such impactful events.

The event concluded with a **vote of thanks** from the coordinators, who expressed gratitude to the **guest speaker, faculty, and students** for their active participation. This seminar marked another milestone in SITAMS' commitment to **academic excellence and industry-oriented learning**, preparing students for the **next era of technological advancements**.


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Prepared by

(Dr.P.Sudheer)