

# Report on the Two-Day Guest Lecture on "Rapid Prototyping & Automation in Manufacturing Process"

Organized by the Department of Mechanical Engineering, Faculty of Engineering, Mewar University, Rajasthan

**Date:** 7th to 8th October 2024

**Venue:** Room no.- 110, Engineering Block, Mewar University, Rajasthan

## Introduction

The Department of Mechanical Engineering under the Faculty of Engineering at Mewar University organized a two-day guest lecture on the topic "Rapid Prototyping & Automation in Manufacturing Process" on the 7th and 8th of October 2024. The guest lecture was delivered by **Mr. Tapas Kalita**, Assistant Professor at Don Vosco University, Guwahati, Assam, a distinguished expert in the field of manufacturing processes.

The lecture series aimed at enhancing students' and faculty members' understanding of rapid prototyping technologies and automation, which are rapidly reshaping modern manufacturing practices. The event received strong support from the university leadership, with the Vice Chancellor of Mewar University underscoring its importance in the academic and professional development of engineering students.

## Day 1: Overview of Rapid Prototyping

**Date:** 7th October 2024

The first day of the guest lecture, led by **Mr. Tapas Kalita**, focused on "Rapid Prototyping" and its critical role in accelerating product development cycles in modern industries. Mr. Kalita introduced various rapid prototyping methods such as: Selective Laser Sintering (SLS), Fused Deposition Modeling (FDM), 3D Printing.

He explained how these techniques have drastically reduced product development times and allowed for iterative testing and improvements in industries like aerospace, healthcare, and automotive. Mr. Kalita demonstrated real-world examples of how rapid prototyping enhances design flexibility, reduces errors, and enables cost-efficient production, inspiring students to explore its applications further.

## **Day 2: Automation in Manufacturing Process**

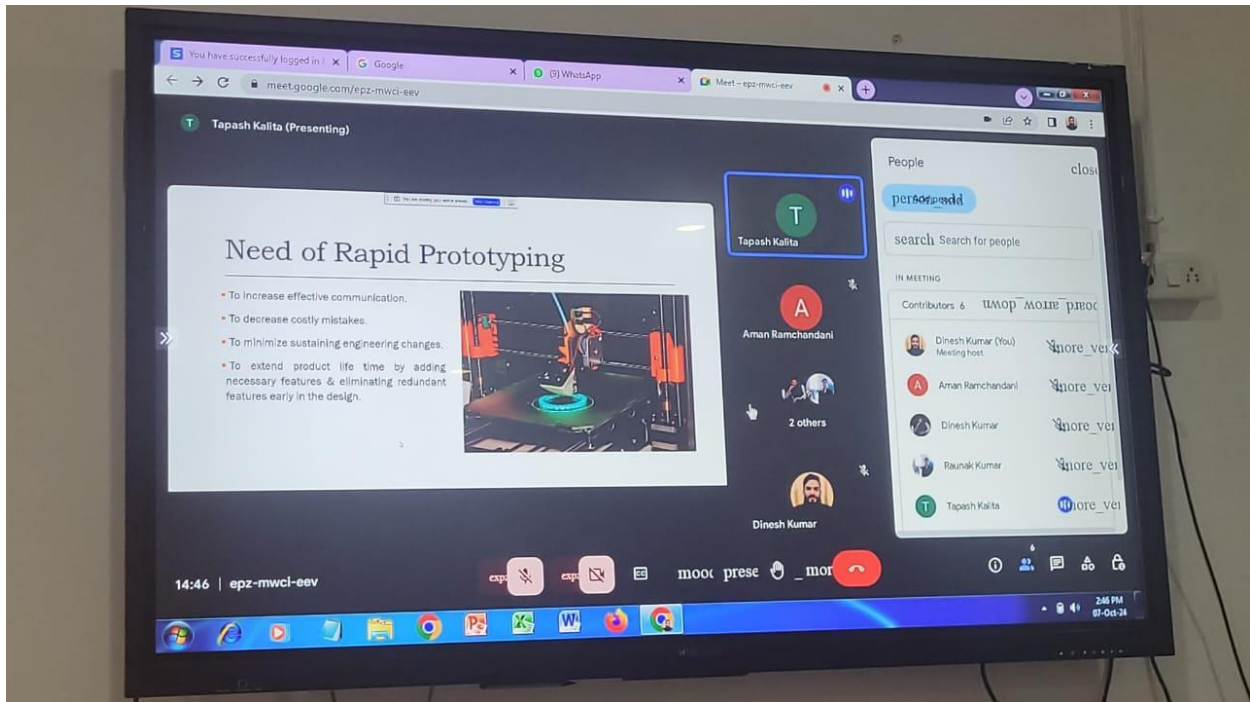
**Date:** 8th October 2024

On the second day, **Mr. Tapas Kalita** shifted the focus to "Automation in Manufacturing Process," covering advanced automation technologies that have become the backbone of smart factories. Key topics discussed included: Robotic Process Automation (RPA), Collaborative Robots (Cobots), Machine Learning and Predictive Maintenance.

Mr. Kalita emphasized how automation reduces human error, improves precision, and significantly enhances manufacturing efficiency. He shared insights into real-world case studies, showcasing the successful integration of these technologies into manufacturing processes. The lecture left participants with a deep appreciation of the transformative power of automation and the increasing reliance on technology in modern industrial practices.

### **Vote of Thanks**

The two-day guest lecture concluded with a **Vote of Thanks** delivered by the **Head of the Department (HOD) Mr. Dinesh Kumar**. The HOD expressed his sincere gratitude to **Mr. Tapas Kalita** for his insightful presentations and for sharing his extensive knowledge on these crucial topics. The HOD also thanked the university's Vice Chancellor, the Deputy Dean, and all the faculty members and students for their active participation and support in making the event a grand success. The **Dy. Dean Mr. Kapil Nahar** highlighted how rapid prototyping and automation are revolutionizing the manufacturing sector, urging students to leverage these innovations for their academic projects and future careers. The **Vice Chancellor (VC) of Mewar University, Prof. (Dr.) Alok Misra**, who congratulated the Department of Mechanical Engineering for organizing the guest lecture on such a pertinent topic. The VC emphasized the growing importance of rapid prototyping and automation in modern-day manufacturing and the need for academic institutions to stay ahead of such trends.



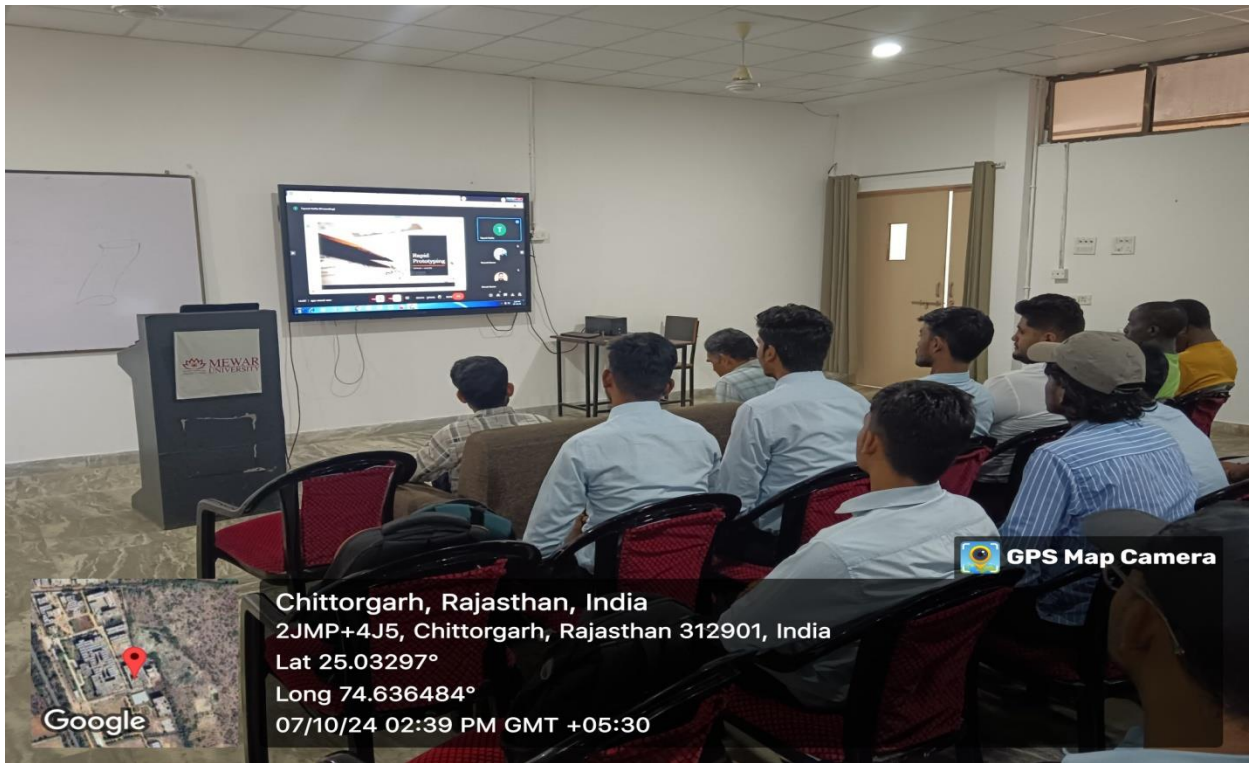


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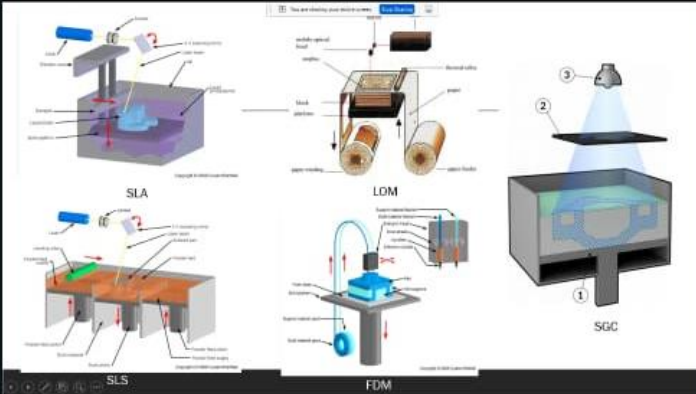
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