



LOKNAYAK JAI PRAKASH INSTITUTE OF TECHNOLOGY, CHAPRA

BIHAR - 841302

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Technical
Education for
a Better Tomorrow



OUR CAMPUS
OUR PRIDE
OUR FUTURE

DEPARTMENT OF MECHANICAL ENGINEERING

NEWSLETTER

TWO-DAY HANDS-ON WORKSHOP ON 3D PRINTING & ADDITIVE MANUFACTURING TECHNOLOGIES

DESIGN | INNOVATE | MANUFACTURE | EXPLORE

The Department of Mechanical Engineering organized a two-day hands-on workshop designed to bridge the gap between academic learning and modern industrial practices through practical exposure to 3D CAD modeling, slicing software, and FDM 3D printing.



EVENT SNAPSHOT



Date

21 – 22
April 2025



Time

2:00 PM –
5:00 PM



Venue

CAD/CAM and
3D Printing Lab,
Department of
Mechanical Engineering



Target Audience

B.Tech Students
(1st Year /
2nd Semester)



Participants

Maximum
20

“ENGINEERING
IDEAS
LAYER
BY LAYER”

From Digital Design to Physical Product

SAME IDEAS. A STRONGER TOMORROW.



CAD Model



Slicing



3D Printer



Printed Object



Why Additive Manufacturing?

Additive Manufacturing (AM) creates objects layer-by-layer from digital models. It enables rapid prototyping, customization, reduced material waste, and modern manufacturing workflows, making it a key technology for the future of engineering and product development.



Rapid
Prototyping



Design
Flexibility



Reduced
Material Waste



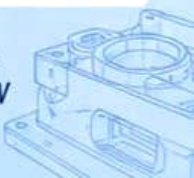
Customization



Modern
Manufacturing
Workflows

DEPARTMENT OF MECHANICAL ENGINEERING
LNJPIT, CHAPRA

SHAPING IDEAS —
BUILDING TOMORROW





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Department of Mechanical Engineering

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*Engineering
Ideas for a
Better
Tomorrow*

Inside the Workshop

Hands-on Learning | Practical Skills | Real-World Applications

A glimpse into the two-day hands-on workshop on "3D Printing & Additive Manufacturing Technologies" organized by the Department of Mechanical Engineering.

**"Learning Today
for a Smarter
Tomorrow"**

Key Learning Areas

1 Additive vs. Subtractive Manufacturing

Understanding the fundamentals and differences.



Additive vs Subtractive

2 3D CAD Model Preparation

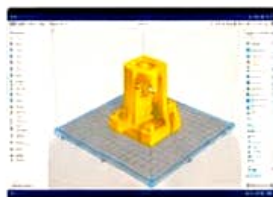
Hands-on modeling using AutoCAD / Fusion 360.



Design • Model • Iterate

3 Slicing Software

Practical experience with Ultimaker Cura / PrusaSlicer.



Prepare • Slice • Optimize

4 3D Printing Execution

Live printer calibration, PLA/ABS material setup, and printing.



Setup • Calibrate • Print

5 Post-Processing & Troubleshooting

Learning finishing techniques and solving common print errors.



Finish • Improve • Troubleshoot

Workshop Journey

FROM IDEA TO IMPACT



Learn

Understand concepts



Design

Create 3D models



Slice

Prepare for printing



Calibrate

Set up machine & material



Print

Bring ideas to life



Inspect

Evaluate & improve

*"Small
Layers
Big
Possibilities"*

Glimpses from the Workshop

STUDENTS | FACULTY | HANDS-ON | COLLABORATION



Hands-on session with 3D printer



Discussion and live demonstration



Exploring slicing software (Ultimaker Cura)



Interactive learning session



Faculty Coordinators

- **Prof. Ajit Kumar Chauhan**
Assistant Professor, Department of Mechanical Engineering
- **Prof. Navneet Kumar Singh**
Assistant Professor, Department of Mechanical Engineering



Student Coordinators

- **Aman Kumar**
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*"Turning Ideas into Reality,
One Layer at a Time."*

DESIGN
INNOVATE
MANUFACTURE
SUSTAIN
EXCEL