



# PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

DEPARTMENT OF MECHANICAL ENGINEERING

Academic year: 2025-26

Date: 28-08-2025

## CIRCULAR

Additive Manufacturing Club of Mechanical Engineering Department in association with Career Guidance Cell is organizing a Seminar to the Mechanical Engineering students on 30<sup>th</sup> August 2025. The Theme of the Seminar is *"Use of AUTOCAD Software in Additive Manufacturing Processes"*.

**Event** : Seminar.

**Date of the Event** : 30<sup>th</sup> August 2025.

**Venue** : MF-12.

  
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2. Departmental file.
3. AM Club In-charge – ME.
4. Career Guidance Cell In-charge – ME.



**PRAGATI ENGINEERING COLLEGE**  
(AUTONOMOUS)  
INDUSTRY 4.0 CLUBS

# **ADDITIVE MANUFACTURING CLUB**

ORGANISED BY DEPARTMENT OF MECHANICAL ENGINEERING IN ASSOCIATION  
WITH  
CAREER GUIDANCE CELL

## **USE OF AUTOCAD SOFTWARE IN ADDITIVE MANUFACTURING PROCESSES**

**SPEAKER :**  
Mrs. K.Tulasi

**FACULTY COORDINATOR**

Mr. P. Ram Prasad  
Assistant Professor  
Mechanical Engineering Department

VENUE: MF-12  
DATE: 30<sup>th</sup> August 2025  
TIME: 9:30 AM Onwards

**STUDENT COORDINATOR**

Mr. P.Eswar Prasanth (23A31A0341)  
Mechanical Engineering Department



# PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

## DEPARTMENT OF MECHANICAL ENGINEERING

A.Y 2025-26

Dt. 30.08.2025

### A SEMINAR

ON

### **“USE OF AUTOCAD SOFTWARE IN ADDITIVE MANUFACTURING PROCESSES”**

The Additive Manufacturing Club of the Mechanical Engineering Department, in collaboration with the Career Guidance Cell, successfully organized a seminar titled **“Use of AUTOCAD Software in Additive Manufacturing Processes.”**

The event was held in the MF-12 room and witnessed enthusiastic participation from 44 second-year Mechanical Engineering students. The seminar was open to all interested students, fostering an inclusive environment that encouraged curiosity and learning about the applications of AUTOCAD software.

The session was delivered by **Mrs. K. Tulasi**, who captivated the audience with her engaging presentation. Her insightful discussion made complex concepts easy to understand, particularly those related to transforming a 3D model into an STL file for additive manufacturing.

The seminar highlighted that while AUTOCAD is not directly an additive manufacturing (3D printing) software, it plays an important supporting role in the design and preparation phase. The session also explained the ways in which AutoCAD contributes to the additive manufacturing workflow.

#### 1. 3D Modeling and Design

- AutoCAD is widely used for creating 2D drawings and 3D models of parts and assemblies.
- Engineers and designers use it to design complex geometries, prototypes, and product components that will later be 3D printed.
- Parametric and non-parametric modeling tools allow precise control of dimensions and tolerances.

#### 2. File Preparation for Printing

- Additive manufacturing requires models in STL (stereolithography) format or similar mesh formats.
- AutoCAD supports exporting designs into STL and 3MF, which are compatible with 3D printers.

#### 3. Design Optimization

- Before sending to the printer, AutoCAD enables:

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- Checking and refining wall thickness
- Ensuring surface smoothness
- Creating support structures (in some workflows, though often finalized in slicing software).
- Helps reduce material waste and improves printability.

#### 4. Prototyping and Product Development

- Designers can visualize and test different product ideas digitally in AutoCAD.
- Quick modification and iteration of designs before moving to actual additive manufacturing.

#### 5. Integration with Other Tools

- AutoCAD designs can be imported into slicing software (e.g., Cura, PrusaSlicer, Simplify3D) that generate the G-code for 3D printers.
- Used in combination with simulation and CAE tools to validate structural strength, heat distribution, and mechanical properties before printing.

#### 6. Industrial Applications

- Medical field → Designing custom implants, prosthetics.
- Automotive & Aerospace → Designing lightweight parts.
- Architecture & Construction → Creating scale models and building components.
- Education & Research → Teaching CAD-based design workflows for 3D printing.

Finally AutoCAD is used in additive manufacturing mainly for designing 2D/3D models, preparing STL files, optimizing geometry, and supporting rapid prototyping. It is an essential CAD tool in the pre-processing stage, but the actual printing requires dedicated slicing and additive manufacturing software.



PICTURES OF THE EVENT:



  
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## DEPARTMENT OF MECHANICAL ENGINEERING

### Participants List

Name of the Event: Use of AUTOCAD software in Additive manufacturing processes  
Venue : MF-12  
Date : 30/8/25

S.No	Roll No	Name	Signature
1	24A31A0307	K. Rama Hasini	K. Hasini
2	24A31A0305	M. Jyothika	M. Jyothika
3	24A31A0304	J. Charishma	J. Charishma
4	24A31A0302	G. Trija Sri	G. Trija
5	24A31A0301	C.H. Deepika	C.H. Deepika
6	24A31A0311	V.S. Shivani	V.S. Shivani
7	24A31A0309	S. Bushwari H	S. Bushwari H
8	25A35A0301	K. Ranya Sri Bhargavi	K. Ranya
9	24A31A0306	K. Krishna Kumari	K. Krishnakumari
10	24A31A0303	I. Hari Santhoshi	I. Santhosh
11	24A31A0308	M. Sowmya Sri	Sowmya Sri
12	24A31A0310	S. Vanisha	S. Vanisha
13	24A31A0331	M. Santosh	M. Santosh
14	24A31A0341	M. Jai Ramcharan	M. Jai Ramcharan
15	24A31A0322	G. Sudhakar	G. Sudhakar

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16	24A31A0354	R. C Dora babu	R.C.
17	24A31A0343	M. Siddardha Teja	M. Siddardha
18	25A35A0304	J.V.R.M. Sai Suresh	J. Suresh
19	25A35A0305	L.U. Sai Pavan	L.U.S. Pavan
20	25A35A0310	m-Abhi. Ravi	
21	25A35A0306	M. Venkatesh Sai	M. Venkatesh
22	25A35A0303	G.V.S.ch. Viswa Teja	G. Viswa
23	24A31A0312	A. ANIL	A. anil
24	25A35A0308	V.S.V.V.S. Karthik	V. Karthik
25	25A35A0307	P. Akshay	P. Akshay
26	24A31A0332	D. Karthika	D. Karthika
27	24A31A0331	K. nikhil	K. nikhil
28	24A31A0315	CH. Manoj	CH. Manoj
29	24A31A0349	P. Yuva Teja	P. Yuva Teja
30	24A31A0316	CH. RAKESH	CH. Rakesh

  
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31	24A31A0317	CH. Naveen Teja	CH. Naveen Teja
32	24A31A0357	V. Siva Ram Chavan	V. Siva Ram Chavan
33	24A31A0328	J. Karthik Sri Ram	J. K. Sri Ram
34	24A31A0327	Gr. Joshua Roy	Gr. Joshua Roy
35	24A31A0358	V. Sai manikanta	V. Sai manikanta
36	24A31A0351	P. N. S. Swesh Kumar	P. N. S. Swesh Kumar
37	24A31A0314	B. V. Bhadra Rao	B. V. Bhadra Rao
38	24A31A0335	K. Jack	K. Jack
39	24A31A0326	I. Abhishek	I. Abhishek
40	24A31A0347	N. John Vidya Sagar	N. John Vidya Sagar
41	24A31A0344	M. Indraneel Kumar	M. Indraneel Kumar
42	24A31A0338	D. Tony Isaac	D. Tony Isaac
43	24A31A0323	Gr. Priyaramudu	Gr. Priyaramudu
44	24A31A0334	K. Santhosh Kumar	K. Santhosh Kumar

  
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