

(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 30th August 2025. The Theme of the Seminar is "Use of AUTOCAD Software in Additive Manufacturing Processes".

Event

: Seminar.

Date of the Event

30th August 2025.

Venue

MF-12.

INCHARGE

Copy to:

1. HOD-ME.

2. Departmental file.

3. AM Club In-charge – ME.

4. Career Guidance Cell In-charge - ME.

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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 MANUFACTUING PROCESSES

SPEAKER:

Mrs. K. Tulasi

FACULTY COORDINATOR

Mr. P. Ram Prasad Assistant Professor Mechanical Engineering Department

STUDENT COORDINATOR

DATE: 30th August 2025 TIME: 9:30 AM Onwards

VENUE: MF-12

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

(AUTONOMOUS)

DEPARTMENT OF MECHANICAL ENGINEERING

4.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 secondyear 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.

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

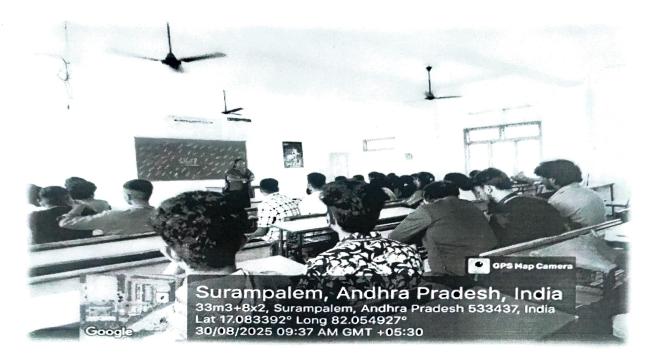
- AutoCAD designs can be imported into slicing software (e.g., Cura, PrusaSlicer, Simplify3D)
 that generate the G-code for 3D printers.
- Used in combination with simulation and CAE tools to validate structural strength, heat distribution, and mechanical properties before printing.

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 tiles. optimizing geometry, and supporting rapid prototyping. It is an essential CAD tool in the preprocessing stage, but the actual printing requires dedicated slicing and additive manufacturing software.

PICTURES OF THE EVENT:





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ADDITIVE MANUFACTURING CLUB





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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
į	24A3IA0307	K. Rama Hasini	(C. Hasini
2	24A31A0305	M. Tyothika	M. Ty othika
3	24A31A0304	J. Charishma	J. Charia
4	24A31A0302	Gr. Trija Svi	670
5	24-131-10301	(H. Doepika	CR. Deepiren
6	X-A31AB11	V.S.Shivani	V.S.Slive
7	04A31A0309	& Bushiani Ha	Buronito.
8	95A35A0301	K. Ramya Sri Rhargavi	K. Panus
9	24A31A0306	K. Krishnalcumovii	h Keishmoteurer
10	24A31A0303	I. Hari Santhoshi	? Santhons:
11	24A3IA0308	M. Sownya 5rg	Sownya su:
12	24A31A0310	S. Vanisha	S. Vanier!
13	24 A3 1 A0331	M. Santosh	Manntosh
14	24A31 A0341	M. Jai Parnchayan	M. JaiPank
15	24A31A0322	Gi. Sudhakar	Granter.

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16	2443140354	R. C Dona Babu	Por
13	24A31A0343	Tr. Siddardha Teja	T. Siddardra
18	25A35A0304	I.V. R. M. Sai Sixwood	I. Sundan
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41	24A31A0344	M. Sndranecl Kurrar	M. Sodjanulkuy.
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