DEPARTMENT OF MECHANICAL ENGINEERING

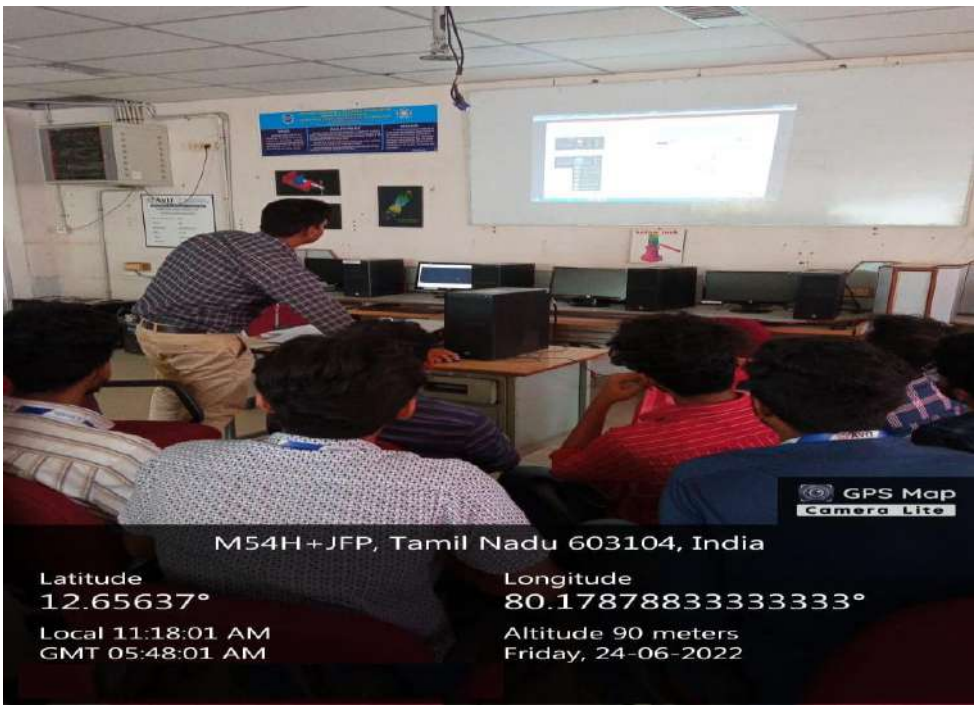
Value Added Course on
"PRODUCTIVE TOOLS IN AUTOCAD"
(From 24.06.2022 to 30.06.2022 - 30 Hours)

The Department of Mechanical Engineering conducted a Value Added Course on "PRODUCTIVE TOOLS IN AUTOCAD" from 24.06.2022 to 30.06.2022 - 30 Hours**.** The course was inaugurated by **Dr. L. Prabhu, HOD / Mech.** Totally 10 sessions were conducted for five days with various resource persons. Around 40 students of Mechanical Engineering were attended.

SESSION 1: INTRODUCTION TO AUTOCAD (9 AM to 12PM)

The first session on Introduction to AutoCAD was conducted by Mr.K.Vijayakumar, AP II/MECH/AVIT.

- History of AutoCAD
- Introduction to AutoCAD software, instruction to how to download software by Educator.
- Introduction to Technical Drafting, Computer Aided Drafting and Design Software versions and differences between the latest versions.
- How to open the software, setting units, layout, dimensions and basic tools to be used.



SESSION 2: INTERFACE, STRUCTURE AND COMMANDS (1 PM to 4 PM)

The second session on commands, interface and structure of AutoCAD software was conducted by Mr. S. Sathiyaraj, AP II/MECH/AVIT.

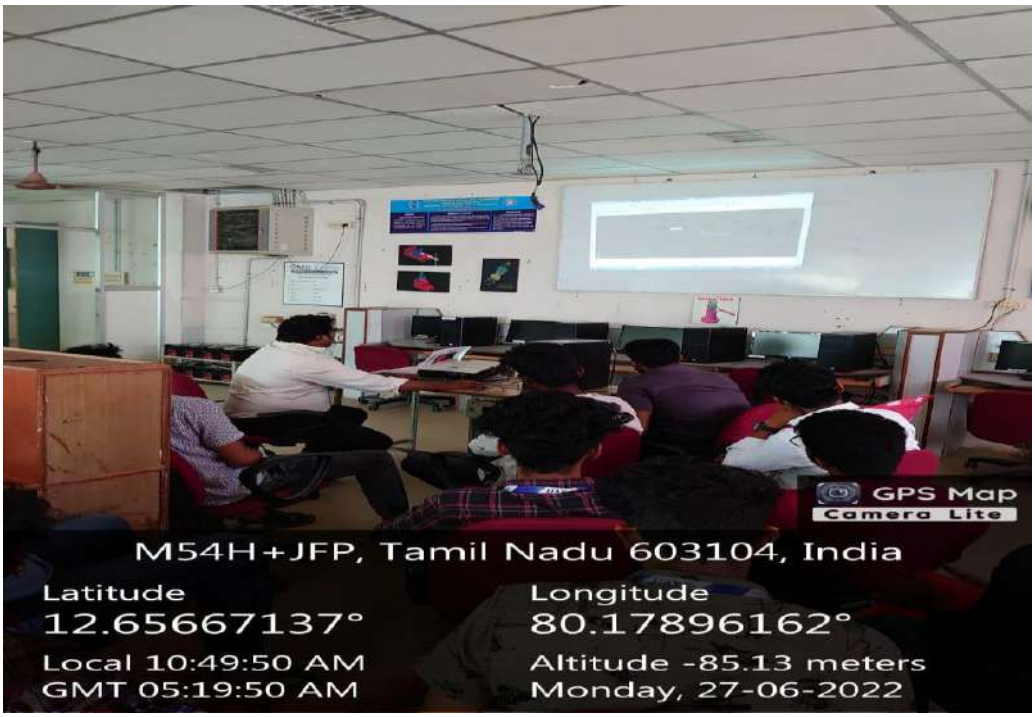
He had shared his presentation on

- Drawing Techniques
- Cartesian coordinate System
- Interacting with User Interface, Common Drawing Setup
- Draw commands, Modify commands, Text command
- Mechanical Structure, Structuring Data in Drawings

SESSION 3: PRODUCTIVITY TOOLS & FEATURES (9 AM to 12PM)

The third session on Productivity Tools & Features in AutoCAD software was conducted by Mr. S. Kalyana kumar, AP II/MECH/AVIT.

- Two-dimensional drawing creation
- Dimension Productivity Tools
- Tools for Creating Key Geometry, Core Design Tools
- Tools for Creating Key Geometry Tools for Manipulating Geometry
- Editing Tools
- Power Command
- Production Drawing Creation
- Adding Standard Feature Data for Holes and Slots



SESSION 4: WIREFRAME AND SURFACE MODELLING (1 PM to 4 PM)

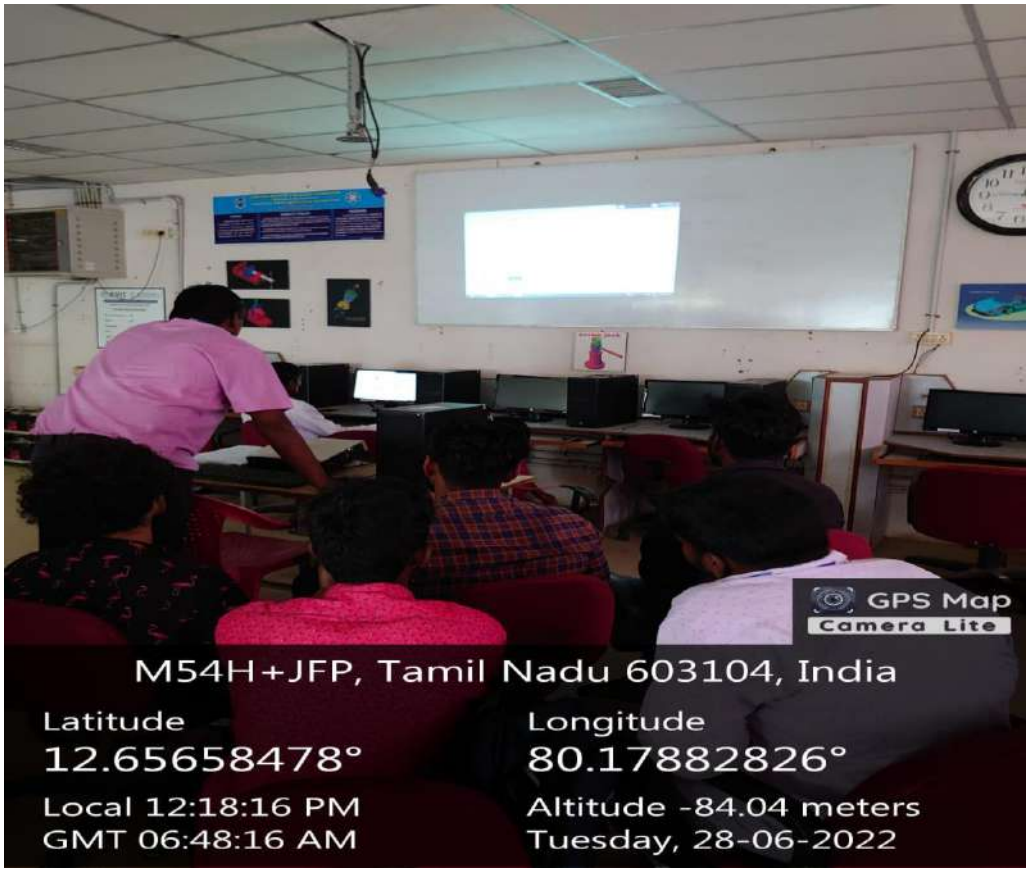
The fourth session on Wireframe and Surface Modelling was conducted by Mr.N.Shivakumar, AP II/MECH/AVIT.

- 2D Fundamentals
- Geometric Shapes, Creating key geometry
- Orthographic Projection/Multiview Drawings
- Isometric drawings
- Wireframe modelling
- Surface modelling

SESSION 5: SOLID MODELLING (9AM to 12PM)

The fifth session on Solid Modelling was conducted by Mr.B.SelvaBabu, AP/MECH/AVIT.

- Solid modelling tools used
- Engineering drawings
- Primary views of solid model
- Production Drawings
- Multiview Drawings



SESSION 6: 2 DIMENSIONAL & 3-DIMENSIONAL MODELLING (1 PM to 4 PM)

The six session on 2 Dimensional & 3 Dimensional modelling was conducted by Mr.G.Antony Casmir, AP II/MECH/AVIT.

- 2D drawings in AutoCAD
- Two-dimensional part modelling
- Drawing from Isometric to Orthographic projection
- 3D drawings in AutoCAD
- Orthographic projection to Isometric view drawing
- Three-dimensional part modelling of different components by showing in multiple views

SESSION 7: ASSEMBLY DRAWING (9 AM to 12 PM)

The seventh session on Assembly Drawing was conducted by Dr.S.Prakash AP II/MECH/AVIT.

- Assembly commands
- How to use assembly commands for assembling Engineering components
- Components assembly
- Assembly views
- Introduction to Analysis software

SESSION 8: PRODUCTION DRAWING (1 PM to 4 PM)

The eighth session on Standard design, Layer and Production drawing was conducted by Mr.S.Sathiyaraj AP II/MECH/AVIT

- Standard Based Design
- Configure Layer, Text, and Symbol Properties
- Solid shape various engineering components
- Assembly of the components
- How to use AutoCAD for production drawing
- Brief about Civil and Architecture CAD

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SESSION 9: TITLE BLOCK LAYOUT DESIGN (9 AM to 12 PM)

The ninth session on Title block layout design was conducted by Mr.A.Imthiyas AP/MECH/AVIT.

- Creating Drawing Sheets, Model Space Views in Layouts
- Title Block and drawing Borders
- Creating Drawing Sheets in Model Space
- Annotation Symbols
- Bill of Materials
- Parts Lists and Balloons

SESSION 10: INTRODUCTION TO SOLIDWORKS, ANSYS (1 PM to 4 PM)

The tenth session on Introduction to Solidworks and Ansys softwares was conducted by Mr.K.Vijayakumar AP II/Mech, AVIT

- Introduction to Solidworks modelling software
- How to open and use solidworks
- Various commands and features used
- Modelling of simple components in solidworks
- Differences of some Modelling softwares such as Solidworks, Catia and Creo
- Introduction to Ansys software
- Applications and why analysis software

End of the session:

Test was conducted at the end of tenth session.

Outcome:

The Value-added course was conducted on ‘Productive tools in AutoCAD’. The students gained knowledge in AutoCAD, student understands how to do part drawings, Engineering component drawings and assembly. Students also learned about solidworks modelling software and analysis software of Ansys.

The **Value Added Course** was coordinated by **Mr.K.Vijayakumar AP II/Mech/AVIT.**