



SNS COLLEGE OF TECHNOLOGY

19MEB301 CAD & Automation

UNIT I

V.KARTHIK

AP/MECH

Introduction to CAD

AP/MECH V.KARTHIK

AP/MECH





Objectives

« CAD/CAM »

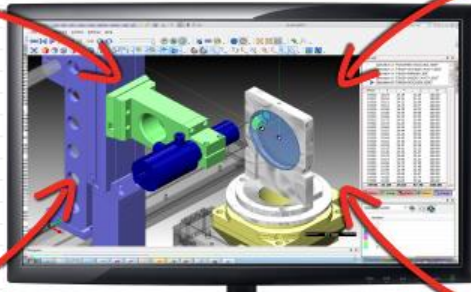
Faster. Smarter. Easier

Powerful

CNC Machining
Toolpaths.

Realistic

Virtual CNC Simulation,
Collision Checking & More.



Automatic G-Code

Simplified Design to CNC
Machining, Posting & More.

Easy To Use

Intuitive CAD/CAM System
Interface.

Source-Shutterstock.com

1

Need of CAD/CAM/CIM

2

Scope of CAD/CAM/CIM



CADCAM-Definition

CAD/CAM is a term which means computer-aided design and computer-aided manufacturing. It is the technology concerned with the use of digital computers to perform certain functions in design and production



Source-Shutterstock.com



1

What is CAD?

Computer-aided design (CAD) is the use of computers (or workstations) to aid in the creation, modification, analysis, or optimization of a design.

2

What is CAM?

Computer-aided manufacturing (CAM) also known as **Computer-aided Modeling** or **Computer-aided Machining** is the use of software to control machine tools and related ones in the manufacturing of work pieces.

3

What is AUTOMATION?

Automation is a term for technology applications where human input is minimized.

CAD



CAM



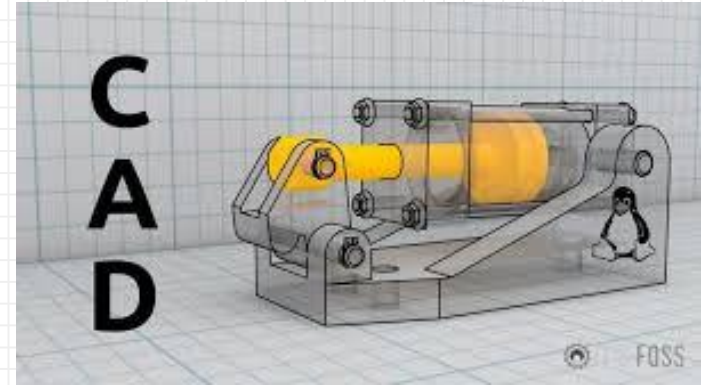
CIM



Need for CAD/CAM/CIM



- ❖ To increase productivity of the designer
- ❖ To improve quality of the design
- ❖ To improve communications
- ❖ To create a manufacturing database
- ❖ To create and test tool paths and optimize them
- ❖ To help in production scheduling and MRP models
- ❖ To have effective shop floor control

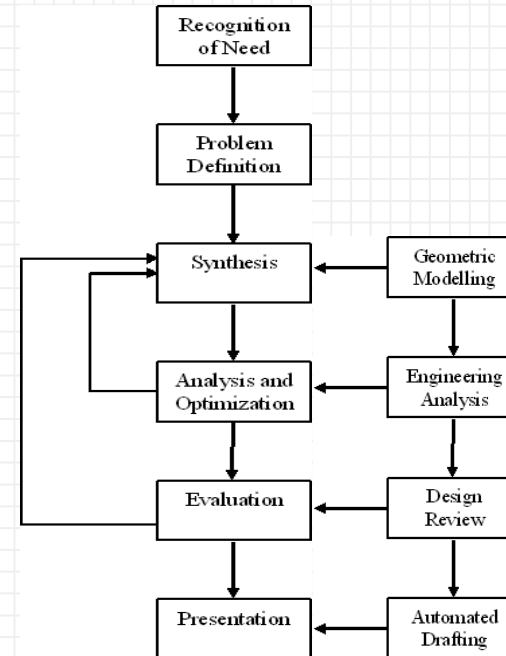


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Elements of Design the Process

- ❖ Problem Identification
- ❖ Research Phase
- ❖ Requirements Specification
- ❖ Concept Generation
- ❖ Design Phase
- ❖ Prototyping Phase
- ❖ System Integration
- ❖ Maintenance Phase



Source-discoverimages.org



ASSESSMENT

<https://create.kahoot.it/share/quiz-on-csg/5929c3cf-6a07-427d-ad01-23cc06ac1b38>

1. Why CAD is needed?
2. How the CAD/CAM is benefited in Manufacturing industries.
3. List some of the CAD softwares.



THANK YOU