# SNS COLLEGE OF TECHOLOGY

# 19MEB301 CAD & Automation

## UNIT I

V.KARTHIK
AP/MECH

## Introduction to CAD

AP/MECHV.KARTHIK
AP/MECH

# Objectives



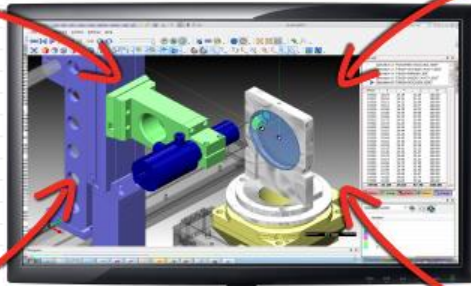Source-Shutterstock.com

**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
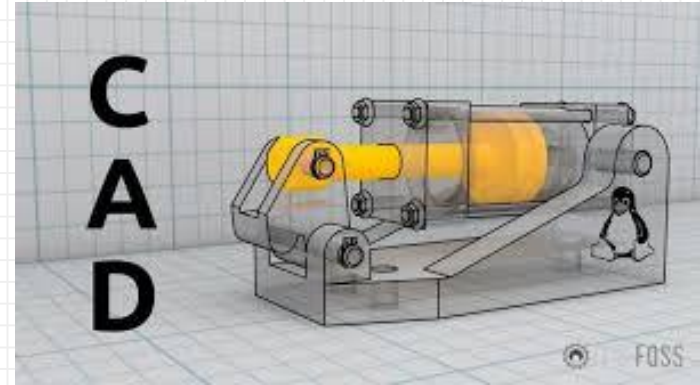
# Need for CAD/CAM/CIM

❖ 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
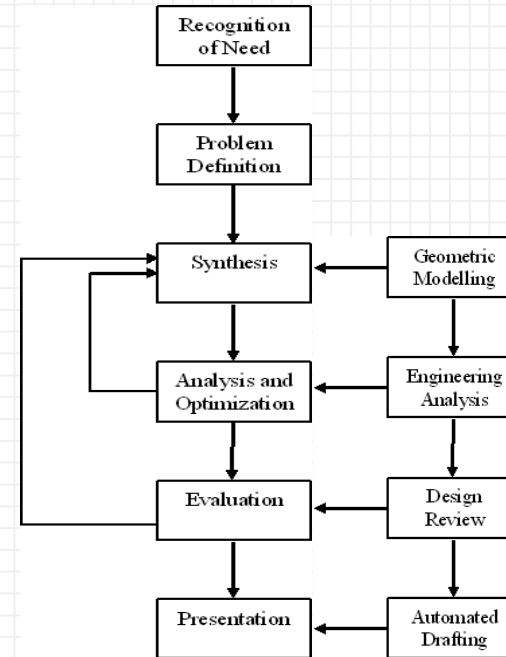
❖ To have effective shop floor control



Source-Shutterstock.com

# 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 CADCAMCAM is benefited in Manufacturing industries.

3.List some of the CAD softwares.

# THANK YOU