

Medi-Caps University, Indore
Madhya Pradesh, India
Summer Training Program
on
Skill Development in CAD CAM CAE

Overview of summer training

Automobile industry is undergoing a digital transformation by virtue of Design, Engineering, and Manufacturing and collaborative product development environment is the need of the hour. A person with working knowledge of CAD, CAM or CAE software can have a good future ahead. This course is designed to cope up digital manufacturing trends by virtue of foundations of CAD, CAM and CAE Concepts . The growing use of these softwares in different industries is also witnessing an increase in demand for relevant professionals. In this course, we take the next step in connecting CAD, CAM, and CAE through a series of short exercises on 3D modeling, rendering, simulation, Computer Aided Manufacturing and Analysing the product model.

Computer Aided Design (CAD) programs are extending their reach to designers, architects, researchers and now even finding its reach in medical science also. That is the reason the software makers are continuously changing and improving features. 3D CAD modeling software is an essential tool in helping all these professions to create the CAD models of the design intent.

Computer Aided Engineering (CAE) is a subsequent process of CAD. CAE is the process of solving engineering problems through the use of sophisticated, interactive graphical software and testing the Product model by applying boundary conditions. Many Analysis Software packages are available now a days out of which Ansys is most commonly used one.

Computer Aided Manufacturing (CAM) is an application technology that uses G & M Program and CNC Machines to facilitate and automate manufacturing processes. CAM is the successor of computer-aided engineering (CAE), once a product design is approved by virtue of Analysis and Simulation.

MAJOR SOFTWARE RESOURCES

AutoCAD 2021
Solid Edge ST1
ANSYS 2021 APDL
ANSYS Work Bench
SIMCAM

Mechanical Engineering Department is offering a one month summer training program on “Skill Development in CAD CAM CAE” from (14 June – 09 July), 2021.

The candidate applying for this training program must have the basic knowledge of automobile and electrical engineering. Applicable for B.Tech. students of Mechanical and Automobile Engineering.

Tentative Schedule

	S. No.	Topic
WEEK 1	1	Introduction to CAD
	2	Draw Commands Practice on AutoCAD
	3	Modify Commands Practice on AutoCAD
	4	Drawing orthographic views of given Geometry in CAD Software
	5	Drawing the given 2D drawings CAD system
	6	Drawing the given 2D drawing of footstep bearing components in CAD system
	7	Isometric Projections in CAD
Week 2	1	Introduction to CAD 3D
	2	Creating the 3D models using Extrude, Press pull , Polysolid , Loft, Revolve , Sweep
	3	Introduction to Finite Element Analysis
	4	Introduction to Ansys APDL and Ansys Workbench
	5	Practical session - Stress analysis on a rectangular Plate, L bracket , Axisymmetric component
	6	Practical sessions- Finding Deflection of a Cantilever Beam
	7	Practical sessions- Finding Deflection of a Simply Supported and fixed Beam
Week 3	1	Practical Session : Structural , Thermal and Mode Frequency Analysis Problems in Ansys
	2	Introduction to Ansys Workbench
	3	Practical session- Static structural analysis of a L bracket in Ansys Workbench
	4	Introduction to Model and thermal analysis in Workbench
	5	Practical session -Transient Thermal Analysis On A Solid Cylinder In Ansys Workbench
	6	Introduction To CFD Basics
	7	Practical session - Analysis Of Fluid Flow in Pipes In Ansys Workbench Fluent
Week 4	1	Introduction to Computer Aided Manufacturing
	2	Comparison between N.C. & C.N.C. M/c , Introduction to CNC, Coding and Simulator
	3	Absolute & Incremental Programming on CNC Mill
	4	Understanding G & M Programming Language for CNC Machines
	5	Writing Program for Some Parts in G & M Programming Language
	6	Simcam Parts on CNC Mill in CNC Simulator Pro
	7	Application of CNC in various fields

Registration Details

1. Fill the Registration Form available at our website www.medicaps.ac.in.
2. Registration link: <https://forms.gle/4HXYt1fruTwt3wW36>
3. The selection of students to any training module is on first come first serve basis.
4. Maximum no. of seats: 60
5. The participants can pay registration fees through Internet transfer, the details are:
Bank: IDBI
A/C No: 0001104000600323
A/C Name: MEDI-CAPS UNIVERSITY-CEP
IFSC Code: IBKL0000001

Contact

For Summer Training Related Queries:

The candidates may mail to:

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