



Pimpri Chinchwad Education Trust's
Pimpri Chinchwad College of Engineering
Sector No. 26, Pradhikaran,
Nigdi, Pune – 411 044



COURSE OUTLINE

Department: Mechanical Engineering

A.Y.:2021-22 Sem-I

Date:05 October, 2021

Class: BE Mechanical

Name of the Course: **CAD/CAM and Automation**

Relevance of the course:

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. This technology is moving in the direction of greater integration of design and manufacturing, two activities which have traditionally been treated as distinct and separate functions in a production firm. Ultimately, CAD/CAM will provide the technology base for the computer-integrated factory of the future. Along with CAD/CAM the automation is the set of procedures that make it possible to perform traditional human activities automatically. It requires the prerequisite knowledge from courses given below

- I. Engineering Materials and Metallurgy
- II. Strength of Materials
- III. Manufacturing Processes
- IV. Solid modeling and drafting

Course Outcomes

CO No	CO Statement	No. of Lectures Planned	No. of Practical planned	Content Delivery method	Assessment tools Planned
1.	To understand the basic analytical fundamentals that are used to create and transform geometric models	6	1	Presentation, Lecture with Interactio	Unit Test 1, Theory assignment 1
2.	To create surface and solid models that are useful for visualization and problem solving in mechanical engineering	6	-	Presentation, Lecture with Interaction	Unit Test 1, Theory assignment 1
3.	To analyse the components using FEA system and softwares	6	2	Presentation, Lecture with Interaction	Unit Test 2, Quiz
4.	To gain a basic understanding of computer numerical control (CNC) machining processes and operations using a combination of G-codes, milling and turning equipment	6	2	Presentation, Lecture with Interaction	Unit Test 2, Quiz

5.	To apply advanced manufacturing methods to complex components	6	7	Presentation, Lecture with Interaction, Quiz	Theory Assignment 2.
6.	To understand the principles of operation of automated equipment with particular reference to industrial robots	6	1	Presentation, Lecture with Interaction	Theory Assignment 2.

Assignment:

Assignment Planned	CO Mapped	Tentative schedule
Assignment on Unit 1 and Unit 2	CO1,CO2	September Second week
Assignment on Unit 5 and Unit 6	CO5,CO6	October last Week

Lectures planned: 45

Practical Planned: 12

Activities:

Students will be encouraged to complete at least one MOOC course related to subject.

Guest Lecture/ Co Teaching: A guest lecture on “Robotics and Automation” by Prof.S.B.Matekar will be arranged in October last week.

		
Course Faculty BE A Mrs.Rita S. Pimpalkar	Course Faculty BE B Mrs.Vrushali Y.Bhalerao	Course Faculty BE C Mr. Ishan R. Sathone
	Course Coordinator -CCA	

CCA Theory and practical formulation:

Sr.No.	Class/Div	Theory	Practical			
			Batch 1	Batch 2	Batch 3	Batch 4
1	BE –A div	RSP	RSP	RSP	RSP	RSP
2	BE –B div	VYB	VYB	VYB	VYB	VYB
3	BE –C div	IRS	VYB	VYB	RSP	RSP