

C. V. RAMAN POLYTECHNIC, BHUBANESWAR

LESSON PLAN

Session (2025-2026)

Discipline: Mechanical Engineering	Semester: 4 th Semester, Summer/2026	Name of the Faculty: Dr. Brundaban Sahoo, Asst.Prof Email ID: brundaban.sahoo@cvrp.edu.in
Subject: COMPUTER- INTEGRATED MANUFACTURING (CIM) , Theory-3 (MEPC 206)	No. of Days/week: 03	Start Date: 22/12/2025 End Date: 18/04/2026

Week	Class Day	Theory Topics
1st	1st	Concept of Computer Integrated Manufacturing (CIM).
	2nd	Basic components of CIM.
	3rd	Advantages and Disadvantages of CIM.
2nd	1st	CIM Distributed database system.
	2nd	CIM distributed communication system,
	3rd	CIM board analysis.
3rd	1st	CIM computer networks for manufacturing;
	2nd	CIM future automated factory.
	3rd	Social and economic factors o CIM.
4th	1st	Computer Aided Design (CAD)
	2nd	CAD hardware and software
	3rd	Product modelling, automatic drafting
5th	1st	Engineering analysis; FEM design review and evaluation.
	2nd	FEM design review and evaluation.
	3rd	Finite element analysis its application.
6th	1st	Group Technology Centre.
	2nd	Advantages & Disadvantages of GTC.
	3rd	Computer Aided Manufacturing (CAM)
7th	1st	Computer assisted NC part programming for plain turning and step turning
	2nd	Computer assisted robot programming
	3rd	Computer aided process planning (CAPP)

8th	1st	CAPP main components.
	2nd	Computer aided material requirements planning (MRP)
	3rd	Computer aided production scheduling
9th	1st	Computer aided inspection planning
	2nd	Computer aided inventory planning
	3rd	Flexible manufacturing system (FMS)
10th	1st	Concept of flexible manufacturing.
	2nd	Advantage of FMS (Benefits of FMS) and Disadvantages
	3rd	FMS in automobile industries.
11th	1st	Application of FMS
	2nd	Integrating NC machines,
	3rd	Introduction to robotics.
12th	1st	Laws of Robotics
	2nd	Classification of Robotics
	3rd	Introduction to AGVs
13th	1st	The various types of AGVs.
	2nd	Introduction to NC equipment
	3rd	NC, CNC, DNC systems.
14th	1st	Computer aided quality control
	2nd	Computer aided business functions
	3rd	Computer aided forecasting.
15th	1st	Computer aided office Automation.
	2nd	Revision 1 st & 2 nd module
	3rd	Revision 3 rd , 4 th & 5 th module


Signature of Faculty
24/12/23


Signature of HOD