

**GOVT. POLYTECHNIC, NAYAGARH**  
**4TH SEMESTER MECHANICAL ENGINEERING 2025-26(SUMMER)**  
**LESSON PLAN**

**Subject- TH:3- COMPUTER-INTEGRATED MANUFACTURING (CIM)**

**Name of Faculty: Mrs. Monalisa Sahoo, Sr. Lect Mech.**

**Session: - 22/12/2025 to 18/04/2026**

**Total Periods: - 45**

**Theory: - 3p/Week**

<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
1	1st	1 <sup>st</sup>	Unit-I: Concept of Computer Integrated Manufacturing (CIM);
		2 <sup>nd</sup>	Basic components of CIM;;
		3 <sup>rd</sup>	Distributed database system.
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
2	2nd	1 <sup>st</sup>	Distributed communication system.
		2 <sup>nd</sup>	Computer networks for manufacturing
		3 <sup>rd</sup>	Future automated factory;
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
3	3rd	1 <sup>st</sup>	Social and economic factors...
		2 <sup>nd</sup>	Revision & Catch-up (Course Content Review)..
		3 <sup>rd</sup>	Unit-II: Computer Aided Design (CAD): CAD hardware and software;
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
4	4th	1 <sup>st</sup>	CAD hardware and software;
		2 <sup>nd</sup>	Product modeling,
		3 <sup>rd</sup>	Product modeling,.
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
5	5th	1 <sup>st</sup>	Automatic drafting;
		2 <sup>nd</sup>	Automatic drafting;
		3 <sup>rd</sup>	Engineering analysis;.
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
6	6th	1 <sup>st</sup>	FEM design review and evaluation;
		2 <sup>nd</sup>	Group Technology Centre
		3 <sup>rd</sup>	Revision & Catch-up (Course Content Review).
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
7	7th	1 <sup>st</sup>	Unit-III: Computer Aided Manufacturing (CAM),.
		2 <sup>nd</sup>	Computer assisted NC part programming for plain turning and step turning;.
		3 <sup>rd</sup>	Computer assisted NC part programming for plain turning and step turning;.
<b>Sl. No.</b>	<b>Week</b>	<b>Period</b>	<b>Topics To Be Covered</b>
8	8th	1 <sup>st</sup>	Computer assisted NC part programming for plain turning and step turning;.
		2 <sup>nd</sup>	Computer assisted robot programming;
		3 <sup>rd</sup>	Computer assisted robot programming;

Sl. No.	Week	Period	Topics To Be Covered
9	9th	1 <sup>st</sup>	Computer assisted robot programming
		2 <sup>nd</sup>	Computer aided process planning (CAPP);
		3 <sup>rd</sup>	Computer aided process planning (CAPP);
Sl. No.	Week	Period	Topics To Be Covered
10	10th	1 <sup>st</sup>	Computer aided material requirements planning (MRP)
		2 <sup>nd</sup>	Computer aided material requirements planning (MRP)
		3 <sup>rd</sup>	Revision & Catch-up (Course Content Review).
Sl. No.	Week	Period	Topics To Be Covered
11	11th	1 <sup>st</sup>	Unit-IV: Computer aided production scheduling
		2 <sup>nd</sup>	Computer aided inspection planning;
		3 <sup>rd</sup>	Computer aided inventory planning
Sl. No.	Week	Period	Topics To Be Covered
12	12th	1 <sup>st</sup>	Flexible manufacturing system (FMS);
		2 <sup>nd</sup>	Concept of flexible manufacturing
		3 <sup>rd</sup>	Revision & Catch-up (Course Content Review).
Sl. No.	Week	Period	Topics to be covered
13	13th	1 <sup>st</sup>	Unit-V: Integrating NC machines
		2 <sup>nd</sup>	Robots
		3 <sup>rd</sup>	Agvs, and other NC equipment.
Sl. No.	Week	Period	Topics to be covered
14	14th	1 <sup>st</sup>	Computer aided quality control;
		2 <sup>nd</sup>	Business functions
		3 <sup>rd</sup>	Computer aided forecasting
Sl. No.	Week	Period	Topics to be covered
15	15th	1 <sup>st</sup>	Office automation .
		2 <sup>nd</sup>	Revision & Catch-up (Course Content Review).
		3 <sup>rd</sup>	Final assessment / doubt clearing session.

## REFERENCES:

1. CAD, CAM, CIM by P. Radhakrishnan and S. Subramanyan, New Age International Publishers
2. Computer Integrated Manufacturing by Paul G. Rankey, Prentice Hall.
3. Robotics Technology and Flexible Automation – S.R. Deb, TMH

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