Walchand College of Engineering, Sangli (Government Aided Autonomous Institute)											
AY 2023-24											
Course Information											
Programme M.Tech. (Mechanical Production Engineering)											
Class, Semester			First Year M. Tech., Sem - II								
Cours	e Code		7OE505								
Cours	e Name		Advanced Production Systems								
Desired Requisites:											
	Teaching	Scheme		Examination Sc	heme	(Marks)					
Lectur	Lecture 3 Hrs/week		MSE	ISE	ESE		Total				
Tutori	ial	-	30	20	50		100				
				Credi	ts: 3	I					
		1	1								
Course Objectives											
1	To impar	t the knowledge	of the fundamenta	ls in advanced prod	uction	systems.					
2	To prepar technique	b) prepare the student for the use of the recent developments in production systems and children for manufacturing									
2	To devel	To develop the student for selection of appropriate production systems and techniques con-									
5	the advar	tages, limitation	ns, cost economy, e	tc.							
	1 0 1	Course	Outcomes (CO) w	ith Bloom's Taxon	omy L	level					
At the	end of the	course, the stud	ents will be able to	,							
CO		Course Outcome Statement/s					Bloom's Texonomy				
0		Cours	e Outcome Staten	icit <i>u</i> s		Level	Description				
CO1		vistinguish the elements and techniques in conventional and									
	Distingui	sh the elemen	its and technique	s in conventional	and	TT	Understandi				
	Distingui advanced	sh the elemen production syst	ts and technique tems	s in conventional	and	II	Understandi ng				
CO2	Distingui advanced Identify	sh the elemen production syst appropriate	its and technique tems production system	s in conventional	and uring	II IV	Understandi ng Analyzing				
CO2	Distingui advanced Identify implemen	sh the elemen production syst appropriate pration	its and technique tems production system	s in conventional	and uring	II IV	Understandi ng Analyzing				
CO2 CO3	Distingui advanced Identify implement Recomm	sh the elemen production syst appropriate p ntation end modern	tems production system equipment's, to	s in conventional ns for manufactu echniques, tools	and uring and	II IV V	Understandi ng Analyzing Evaluating				
CO2 CO3	Distingui advanced Identify implemen Recomm methodol	sh the elemen production system appropriate partition end modern ogy for advance	tems production system equipment's, te ed production syste	s in conventional ns for manufacture cchniques, tools ms.	and uring and	II IV V	Understandi ng Analyzing Evaluating				
CO2 CO3	Distingui advanced Identify implemen Recomm methodol	sh the elemen production syst appropriate p ntation end modern ogy for advance	tems production system equipment's, to ed production system	s in conventional ns for manufactu echniques, tools ms.	and uring and	II IV V	Understandi ng Analyzing Evaluating Hours				
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V	CIM and company strategy - system modeling tools -IDEF models - activity cycle diagram CIM open system architecture (CIMOSA)- manufacturing enterprise wheel-CIM architecture- CIM implementation software. Communication fundamentals- local area networks -topology -LAN implementations – network management and installations	6				
VI	Open systems - open system inter connection -manufacturing automations protocol and technical office protocol (MAP /TOP) Development of databases - Architecture of database systems - data modeling and data associations - relational data bases - database operators - advantages of data base and relational database.	6				
	Textbooks	2 1 1				
1	1 Mikell.P.Groover "Automation, Production Systems and computer integrated manufacturing", Pearson Education 2008.					
2	Groover M.P., "Automation, Production Systems and Computer Integrated Manufacturing", Prentice-Hall of India Pvt Ltd., New Delhi, 2010					
3	Kalpakjain, "Manufacturing Engineering and Technology", Addision-Wesley Publishing Co.1995.					
References						
1	Ranky, Paul G., "Computer Integrated Manufacturing", Prentice Hall Internation	al, 2010.				
2	David D.Bedworth, Mark R.Hendersan, Phillip M.Wolfe "Computer Integrated Design and Manufacturing", McGraw-Hill Inc 2008.					
3	Date.C.J, "An Introduction to Database Systems", Narosa Publishing House, 2004					
4	Kerr.R, "Knowledge Based Manufacturing Management", Addison Wesley, 2003					
Useful Links						
1	https://nptel.ac.in/courses/112/107/112107078/					
2	https://nptel.ac.in/courses/112/107/112107077/					
3	https://nptel.ac.in/courses/110/106/110106044/					

CO-PO Mapping									
	Programme Outcomes (PO)								
	1	2	3	4	5	6			
CO1	1	2							
CO2		2	3						
CO3			2	2	2				
The strength of mapping is to be written as 1,2,3; Where, 1:Low, 2:Medium, 3:High									

Each CO of the course must map to at least one PO.

Assessment

The assessment is based on MSE, ISE and ESE.

MSE shall be typically on modules 1 to 3.

ISE shall be taken throughout the semester in the form of teacher's assessment. Mode of assessment can be field visit, assignments etc. and is expected to map at least one higher order PO.

ESE shall be on all modules with around 40% weightage on modules 1 to 3 and 60% weightage on modules 4 to 6.

For passing a theory course, Min. 40% marks in (MSE+ISE+ESE) are needed and Min. 40% marks in ESE are needed. (ESE shall be a separate head of passing)