

Programme: MMS Semester: III Period: Aug'20 – November'20

Course Code: MMS-O307

Name of the subject: Manufacturing Resource Planning & Control

Maximum marks: 100 (60+40) No. of Sessions: 13/14 (3 hrs each)

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Program Outcomes (PO)

- 1. Nurture leadership skills, teammembership skills and mutual trust.
- 2. Demonstrate decision-making ability.
- 3. Ability to develop culture of technology-usage.
- 4. Inculcate social sensitivity among students.
- 5. Integrate and apply business knowledge and management techniques for problem-solving / analytical skills.

Course Outcomes (CO)

- **CO1.** To understand & analyze the importance of manufacturing resources planning and control to achieve continuous improvement in the better performance.
- **CO2.** To give knowledge of quantitative methods as well as various tools of resources planning like MRP1,MRP2 & ERP &
- **CO3.** To apply above methods for decision making in operations

Reference Books:

- 1. Production/ Operations Management-Ashwathappa & Shridhar Bhat
- 2. Operations Management (Theory & Practice)- B. Mahadevan Person publication 2nd edition.
- 3. Production/ Operations Planning and Control-Stephen Chapman
- 4. Operations Planning & Control-S.K Mukhopadhaya
- 5. Manufacturing Planning and Control-Volmann, Berry, Whybark

A. Plan:

Sess ion No.	Planned Date	Topic	Ref. Study Material	Course Outcomes
1		Overview of operations planning & control recent business environment, Challenges in competitive edge.	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO1
2		Various Manufacturing resources importance their planning and control. Functions of operation planning and Control	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO1



T	Academic Year:		1
3	Hierarchy of production plans overview, linkages to achieve business plans	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO1
4	Various models optimization line balancing models.	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO2,CO3
5	Demand management capacity planning models layout models.	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO2, CO3
6	Mater production scheduling module (I) Need objectives functions flow of materials in different manufacturing scenarios Internal Test	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO2
7	MPS module (II) Broader heading, planning horizon time periods, order management, safety and hedges, effect of changing MPS.	Production/ Operations Management- Ashwathappa & Shridhar Bhat	CO2
8	Materials requirement planning MRP1 Broader topics: Introduction roles & functions.	2 nd chapter of Materials & Logistics Management by Prof. L.C. JHAMB	CO2
9	Independent & dependent demand, Types of Bills of materials, Quantitative problems, MRP as systems	2 nd chapter of Materials & Logistics Management by Prof. L.C. JHAMB	CO1
10	Capacity Management: Introduction to capacity, capacity management, need capacity planning level visa visca, production planning. 1) Capacity expansion strategies 2) Rough out capacity planning RCCP 3) CRP- Capacity requirement Planning 4) Scheduling strategies	Operations Planning & Control-S.K Mukhopadhaya Chapter 5	CO1



	5) Production smoothly policies 6) Finite & Infinite loads.		
11	Manufacturing Resource planning MRP II (Module I) : Introduction to MRP II, Roles functions frame work of information flow in MRP II, Relation of MRP II with demand management and capacity management manufacturing calendar.	Manufacturing Planning and Control- Volmann, Berry, Whybark	CO2,CO3
12	MRP II module II: Transition of MRPI to MRPII closed loop MRP, comparison between MRP1 & MRP II benefits Internal Test	Manufacturing Planning and Control- Volmann, Berry, Whybark	CO2
13	ERP – Need, function & utility to business ERP-SAP-PPC modules. Reports, Interpretation variance. Analysis – use in decision making	Manufacturing Planning and Control- Volmann, Berry, Whybark	CO2, CO3
14	Case studies & presentation on all above topics.	Manufacturing Planning and Control- Volmann, Berry, Whybark	

B. Practical Approach: Other activities

Sr. No.	Activity Name	Topic Covered	Learning Outcomes	Source
1	Case study	'		
2	Academic Projects			
3	Group Discussion	~		
4	Role Play			
5	Industry Visit			
6	Business Quiz / Business News sharing	/		



7	Videos / Simulation	V	
8	Use of Software and Labs		
9	Any other activity		

C. Innovative Pedagogy adopted:

Prepared by:	Approved by:
Faculty	Specialisation Head
Date:	Date:

A. Execution:

Session No.	Actual Date	Topic Covered	Evaluation Method	Case Study Ref.	Quiz Ref.	CR Sign



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B. Evaluation:

Component	Details	Marks
Presentations	Mandatory	10
Class Tests	Mandatory (MCQ, Descriptive, etc)	20
Attendance & Active Participation	Mandatory	5
Overall Conduct	Mandatory	5
Final Exam	Mandatory	60

Comments / Suggestions / Recommendations:

Suggestions (if any) to students on subject related Certificate/Diploma or Add-on program: -

Signature of Faculty

Signature of Co-ordinator