



ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, New Delhi & Affiliated to JNTU-Kakinada)
An ISO 9001:2008 Certified Institution, A NAAC Accredited Institution
Vijayawada

DEPARTMENT OF MECHANICAL ENGINEERING
LESSON PLAN

A.Y. : 2020-2021

Faculty: T.SUBBA REDDY

Programme	B.TECH-MECHANICAL ENGINEERING
Semester	VIII
Subject Title	PRODUCTION PLANNING AND CONTROL
Code	R42031
Hours	6
Total Hours	63
Credits	3
Max Marks	100
Unit & Title	Unit-1: Introduction to PPC and Organization Structure
T-L tools	Lecture method, Audio Visual aid: Teaching about basic concepts production planning and control and discussing some organizations with examples.

Course Objectives:

This subject provides students with

1. An understanding of the concepts of production and service systems;
2. The ability to apply principles and techniques in the design, planning and control of these systems to optimise/make best use of resources in achieving their objectives.
3. Identify different strategies employed in manufacturing and service industries to plan production and control inventory.

4. Measure the effectiveness, identify likely areas for improvement, develop and implement improved planning and control methods for production systems

Course Outcomes:

Upon successful completion of this course you should be able to:

1. To conceptualise the different types of production systems and their planning, control.
2. Ability to forecast the demand by using different forecasting techniques.
3. Ability to distinguish different inventory control systems and apply selective inventory control techniques for dependent and independent demand situations.
4. Ability to develop routing procedures in production planning.
5. Ability to apply different strategies for aggregate planning and scheduling activities.
6. Ability to understand the role of dispatching and applications of computers in production planning and control

LESSON PLAN - DAY WISE

Course Outcomes:

S. No	Outcomes	Lesson Objectives
1	Factual	Students should understand the fundamentals of production planning and control
2	Conceptual	To identify concepts of forecasting, inventory control, routing, scheduling and dispatching concepts with good understanding of the theoretical basis of production planning and control.
3	Procedural	Students should be able to learn basic procedures of production planning and control concepts.
4	Applied	Students can be able to use the different concepts of ppc in industrial sector.

Schedule and Sequence: Day Plan

Session / Module / Day	Topic	Objectives	Before Class (Videos, E-Books, Case Studies)	In Class (Activities, Quiz, Solving Problems)	Post Class (Assignment, Discussion Forum)
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6-4-21	Introduction: Definition – objectives	To make the student gain knowledge & to know the importance of ppc	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Introduction of importance and history -30 mins. PPT lecture -20 mins. Discussion of class-5 mins. 	To understand the Basic Introduction
6-4-21	Types of production	The students should know Types of production	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Revision of previous class-5 mins PPT -50 mins 	To understand and to make the note of types of production.
7-4-21	Functions of PPC	To know about Functions of PPC	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Revision of previous class-5 mins PPT -50 mins 	To understand and to make the note of Functions of PPC.
10-4-21	Elements of PPC	Students should know Elements of PPC.	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Revision of previous class-5 mins PPT -50 mins 	To understand and to make the note of Elements of PPC.
12-4-21	Difference between production planning and production control	Students should know the Difference between production planning and production control	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Explanation about the topic-50 mins Discussion about overall class: 5 mins 	Doubts and discussions of the topic

12-4-21	Organization of production planning and Control departmen,	Students should know the Organization of production planning and Control departmen,	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation about the topic-50 mins • Discussion about overall class: 5 mins 	Doubts and discussions of the topic
13-4-21	Internal organization of PPC	Students should know the Organization of production planning and Control department,	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation about the topic-50 mins • Discussion about overall class: 5 mins 	Doubts and discussions of the topic
17-4-21	Advantages and Disadvantages of PPC	Students should know the Advantages and Disadvantages of PPC	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
19-4-21	Applications of PPC	Students should know the Applications of PPC .	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Revision of previous class-5 mins • Explanation about the topic-45 mins • Discussion about overall class: 5 mins 	Doubts and discussions of the topic
19-4-21	Overview of unit-1	Overview of unit-1	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Discussion of Unit-1 	Slip test on Unit-1

20-4-21	Forecasting – importance of forecasting	Students should know the importance of forecasting	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation about the topic-45 mins • Discussion about overall class: 5 mins 	Doubts and discussions of the topic
22-4-21	Demand forecasting	Students should know the concept of demand forecasting	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
24-4-21	Qualitative forecasting methods	Students should know the Qualitative forecasting methods	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
26-4-21	Qualitative forecasting methods	Students should know the Qualitative forecasting methods	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
27-4-21	Least square method of forecasting	To know the Least square method of forecasting	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic

28-4-21	Least square method of forecasting	To know the Least square method of forecasting	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
29-4-21	Moving average method of forecasting	To know the concept and procedure of moving average method of forecasting	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
30-4-21	Weighted Moving average method of forecasting	To know the concept and procedure of weighted moving average method of forecasting	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
1-5-21	Exponential smoothing method of forecasting	To know the concept and procedure of exponential method of forecasting	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
3-5-21	Exponential smoothing method of forecasting	To know the concept and procedure of exponential method of forecasting	<ul style="list-style-type: none"> Text Book ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic

4-5-21	Forecasting errors	To know the Forecasting errors	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
5-5-21	Regression analysis	To know the concept of regression analysis	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
6-5-21	Inventory control and introduction	To know the concept of Inventory control	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
7-5-21	Types of Inventories	To know the concept of Inventory control	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
8-5-21	Inventory management – functions of inventories	To know the concept of Inventory control	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic

10-5-21	Inventory Costs	To know the types of Inventory Costs	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
11-5-21	Inventory Models	To know the types of Inventory models	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
12-5-21	Inventory Models	To know the types of Inventory models	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
13-5-21	Inventory control systems	To know the concept of inventory control systems	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
14-5-21	Introduction to MRP I	To know the concept of MRP	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic

15-5-21	MRP II , ERP	To know the concept of MRP2, ERP	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
16-5-21	LOB (Line of Balance),	To know the concept of LOB (Line of Balance),	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
18-5-21	JIT system	To know the concept of JIT	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
19-5-21	KANBAN SYSTEM	To know the concept of KANBAN SYSTEM	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
22-5-21	Relevant inventory costs - ABC analysis	To know the concept of ABC analysis	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	QUIZ

24-5-21	VED analysis - EOQ model	To know the concept of VED analysis	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
25-5-21	Routing- Definition	To know the concept of routing	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
26-5-21	routing procedure	To know the concept of routing	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
27-5-21	Route sheets	To know the concept of routing	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
29-5-21	Factors affecting routing procedure,	To know the concept of routing	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic

31-5-21	Bill of materials	To know the concept of routing	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
1-6-21	Schedule –definition – difference with Loading	To know the difference between scheduling and Loading	<ul style="list-style-type: none"> • Text Book • ..\Downloads\Industrial-Engg-Mgmt-O-P-khanna - BY Civildatas.com.pdf 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Quiz and assignment
2-6-21	Scheduling policies	To know the concept of scheduling policies	<ul style="list-style-type: none"> • Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
3-6-21	Scheduling policies	To know the concept of scheduling policies	<ul style="list-style-type: none"> • Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic
5-6-21	Scheduling techniques	To know the concept of scheduling techniques	<ul style="list-style-type: none"> • Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> • Explanation of the topic -55 mins 	Doubts and discussions of the topic

	Scheduling techniques	To know the concept of scheduling techniques	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
7-6-21	Line balancing	To know the concept of line balancing	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
8-6-21	Aggregate planning	To know the concept of Aggregate planning	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
9-6-21	Aggregate planning	To know the concept of Aggregate planning	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
10-6-21	Chase planning	To know the concept of chase planning	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic

14-6-21	Expediting	To know the concept of expediting	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
15-6-21	controlling aspects	To know the concept of expediting	<ul style="list-style-type: none"> Text book of Operations and production management by Pannerselvam 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
16-6-21	Dispatching – activities of dispatcher	To know the concept of dispatching	<ul style="list-style-type: none"> Text book of industrial management by Marthand Teleslang, S. Chand Publishers 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
17-6-21	Dispatching procedure – follow up – definition	To know the concept of dispatching	<ul style="list-style-type: none"> Text book of industrial management by Marthand Teleslang, S. Chand Publishers 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
19-6-21	Reason for existence of functions	To know the concept of dispatching	<ul style="list-style-type: none"> Text book of industrial management by Marthand Teleslang, S. Chand Publishers 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic

21-6-21	Types of follow up	To know the concept of follow-up	<ul style="list-style-type: none"> Text book of industrial management by Marthand Teleslang, S. Chand Publishers 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
22-6-21	Applications of computer in production planning	To understand the applications of computers in ppc	<ul style="list-style-type: none"> Text book of industrial management by Marthand Teleslang, S. Chand Publishers 	<ul style="list-style-type: none"> Explanation of the topic -55 mins 	Doubts and discussions of the topic
23-6-21	RIVISION UNIT-1	To revise the entire unit for any complex topics explanation	<ul style="list-style-type: none"> To prepare the unit1 	Discussing entire unit	To prepare for the exam
24-6-21	RIVISION UNIT-2	To revise the entire unit for any complex topics explanation	<ul style="list-style-type: none"> To prepare the unit2 	Discussing entire unit	To prepare for the exam
25-6-21	RIVISION UNIT-3	To revise the entire unit for any complex topics explanation	<ul style="list-style-type: none"> To prepare the unit3 	Discussing entire unit	To prepare for the exam

26-6-21	RIVISION UNIT-4	To revise the entire unit for any complex topics explanation	<ul style="list-style-type: none"> To prepare the unit4 	Discussing entire unit	To prepare for the exam
28-6-21	RIVISION UNIT-5	To revise the entire unit for any complex topics explanation	<ul style="list-style-type: none"> To prepare the unit5 	Discussing entire unit	To prepare for the exam
30-6-21	RIVISION UNIT-6	To revise the entire unit for any complex topics explanation	<ul style="list-style-type: none"> To prepare the unit6 	Discussing entire unit	To prepare for the exam

TEXT BOOKS:

1. Text book of industrial engineering and management by Marthand Teleslang, S.Chand Publishers.
2. Text book of Operations and production management by Pannerselvam.
3. Text book of industrial engineering and management by O.P.Khanna .
4. A text book of Production Planning and control by T.Subba Reddy and K.Saichand



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DEPARTMENT OF MECHANICAL ENGINEERING
MICRO LESSON PLAN

A.Y. : 2020-2021

Faculty: T.SUBBA REDDY

Programme	B.TECH-MECHANICAL ENGINEERING
Semester	VIII
Subject Title	PRODUCTION PLANNING AND CONTROL
Code	R1642031
Hours	6
Total Hours	63
Credits	3
Max Marks	100
Unit & Title	Unit-1:Introduction to PPC
T-L tools	Lecture method, Audio Visual aid: Discussing about basic concepts production planning and control and types by offline class teaching, video lectures, industrial examples.

Prerequisite Knowledge: Types of production

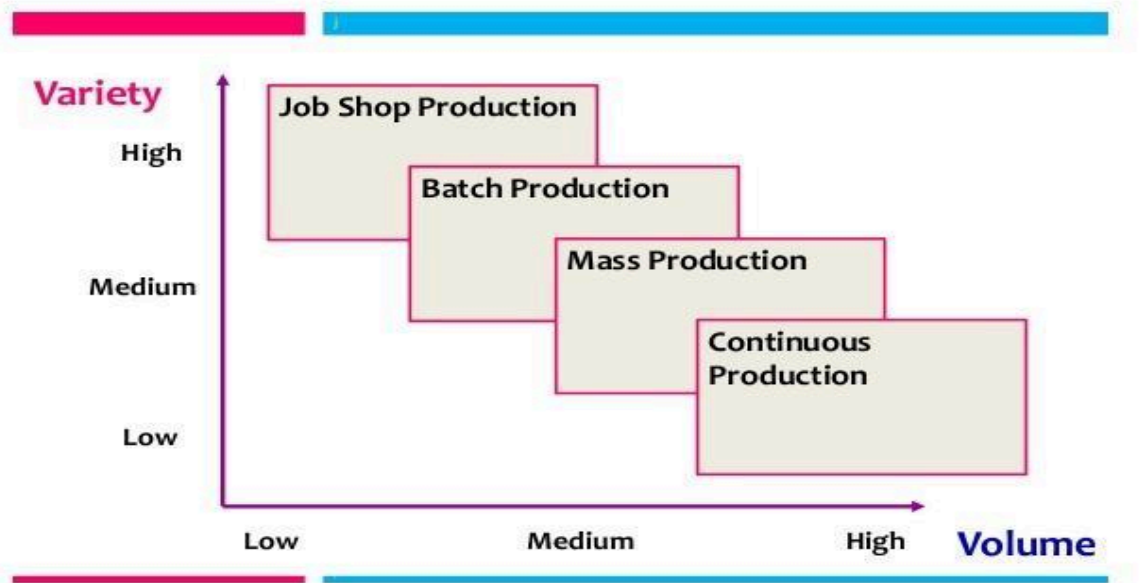
Micro planning:

1.Topic for Learning through evocation;

Video lecture-<https://www.youtube.com/watch?v=2OBKUR5cjIM>

2.Topic Introduction: Basic types of production systems ,characterstics,advantages,disadvantages with applications.

Product Process matrix



Blooms Taxonomy - Revised



Taxonomy of Objectives

Taxonomy of Objectives						
Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyze	Evaluate	Create
A. Factual Knowledge	1,2	1,2,3				
B. Conceptual Knowledge	1,2,3	1,2,3				

3.Discussion.

The students should understand the basic types of production systems with their characteristics and they enable to identify which system is better to the industry based on marketing conditions.

4.Summary. Production is an organized activity of converting raw materials into useful products, by organized utilization of natural resources, men, money, materials and machines. Whereas in the input. Conversion – output sequence, the smallest unit of productive activity, is termed as operation. Therefore an operation is some step in the overall process of producing a product or service that heads to final output.

Production methods fall into three main categories: job (one-off production), batch (multiple items, one step at a time for all items), and flow (multiple items, all steps in process at once for separate items).



5.FAQ's:

1. In which production system , items made individually?

- a. Job b. batch c. mass d. continuous

2. "Highly skilled staff as have to make specialised one off products"

Is an advantage of which type of production method.

a. Job b. batch c. mass d. continuous

3. Which production method produces the most items?

a. Job b. batch c. mass d. continuous

6.References.

1.Industrial engineering and management by **Marthand Teleslang.**

2. Production and Operations management by **Pannerselvam.**