PLANNING & CONTROL OF PRODUCTION SYSTEMS–El 2
Semester I (Production Engineering) SUB CODE: MEPR107-C
Teaching Scheme (Credits and Hours)

Teaching Scheme				Total Credit	Evaluation Scheme					Total Marks
L	T	P	Total		THEORY		IE	CIA	PR. / VIVO	
					Hrs	Marks	Marks	Marks	Marks	
Hrs	Hrs	Hrs	Hrs							
3	0	2	5	4	3	70	30	20	30	150

LEARNING OBJECTIVES:
The objective of this course is

- To learn various concepts related to machining
- To have practical purview of various production techniques

LESSON PLANNING

SR.NO	CHAPTER NO	DATE/WEEK	%WEIGTAGE
1	1,2	1^{st} 2^{nd} 3^{rd}	20
2	3,4	4^{th} 5^{th} 6^{th}	20
3	5,6	7^{th} 8^{th} 9^{th}	20
4	7	10^{th} 11^{th} 12^{th}	20
5	8	13^{th} 14^{th} 15^{th}	20

Total hours (Theory): 45, Total hours (Practical):30, Total hours: 75

DETAILED SYLLABUS

Chap. No.	Topic
1	Organisation, organisational structure, types of organisation structure, multi-plant organisation.
2	Production, Types of Production, Production System and its elements, Generalized model of Production System. Products and Services, Design & Development
3	Forecasting: Importance, the marketing interface, the materials interface, Basic Techniques
4	System Economics: Tactics & Strategies, Break-Even-Analysis, Life Cycle analysis and capacity requirement planning, VAT analysis, Learning curve
5	The plant or facilities - Location and design of the plant or facilities, Layout of the facilities, Equipment selection, Maintenance of the facilities and equipment
6	Material and Inventory Management. Demand analysis, Resource Planning, Aggregate Production Planning, Line Balancing. Materials requirement planning
7	Sequencing and Scheduling and loading. Human Factors: Manpower planning, Placement, Leadership and Supervision, Training, Motivation, Safety, Theory of decision making
8	An overview of control and control techniques. Production Monitoring and Control, Productivity analysis, Performance Criteria and evaluation, Case Studies and Example

LIST OF PRACTICALS

Sr. No.	Practical Content
1	TO USE APPROPRIATE FORECASTING METHOD FOR A GIVEN CONDITION
2	DESIGN OF FACILITY LAYOUT FOR MASS PRODUCTION
3	DESIGN OF FACILITY LAYOUT FOR BATCH PRODUCTION
4	DESIGN OF FACILITY LAYOUT FOR JOB SHOP PRODUCTION
5	ASSESSMENT OF SCHEDULING CASE FOR A GIVEN CASE
6	TO ANALYZE THE INVENTORY MODELS BASED ON THE REQUIREMNT
7	ANALYSIS OF LINE BALANCING PROBLEM IN AN AUTOMOBILE INDUSTRY
8	TO FIND OVERALL PRODUCTIVITY OF A GIVEN SYSTEM BASED ON PERFORMANCE CRITERIA
9	CASE STUDY ON MRP & TO GET AQUAINTED WITH MRP SOFTWARE
10	CASE STUDY ON PRODUCTIVITY ANALYSIS

INSTRUCTIONAL METHOD AND PEDAGOGY (Continuous Internal Assessment (CIA) Scheme)

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed
- Lecture may be conducted with the aid of multi-media projector, black board, OHP etc. & equal weightage should be given to all units while conducting teaching & examination.
- Attendance is compulsory in lectures and Tutorial.
- Viva Voce will be conducted at the end of the semester of 30 Marks.
- One internal exam of 30 marks is conducted as a part of Mid semester evaluation.

STUDENTS LEARNING OUTCOMES:

At the end of the course

- The students will gain an experience to implement the concepts of planning & in the various sectors of modern industry

Reference Books:

References:

1.Production and Operations Management - E.S. Buffa, New Age International (P) Ltd., New Delhi.
2. Production Systems: Planning, analysis and Control - J.L. Riggs, John Wiley & Sons, New York.
3. Production and Operations Management - S.N. Chary, Tata McGraw-Hill Publishing Co. Ltd., New Delhi