ME330 Production and Operations Management										
L	**T**	**P**	Credit	Area		**CWS**	**PRS**	**MTE**	**ETE**	**PRE**
3	0/1	2/0	4	DEC/GEC		15/25	25	20/25	40/50	-

Objectives: To enable the students to understand the fundamentals of operations strategy, Process of decision, Product design and learning curve. To understand Fundamentals of inventory and its models and PERT & CPM.

Syllabus		**Contact Hours**
Unit-1	**Introduction to POM** Introduction to POM, Operations strategy, strategy design process, corporate and operations strategies, Operations competitive dimensions, Process of decision-making under- certainty, uncertainty and risk.	**6**
Unit-2	**Product and Process Design** Product design and development processes, product life cycle, Process flow chart, Types of processes, Process performance, Learning curve.	**8**
Unit-3	**Facility location and Layout** Factors affecting the location decisions, methods of facility location factor rating systems, centroid method, and profit volume analysis; Types of layout, Block diagram and Assembly Line Balancing.	**8**
Unit-4	**Demand Forecasting** Qualitative and quantitative forecasting, Time series and regression models, Measures of forecasting errors.	**6**
Unit-5	**Inventory model** Importance of inventory, understocking and overstocking, Fixed order quantity models and fixed time period models (EOQ models), Selective inventory management- ABC, VED, and FSN analysis, JIT manufacturing system, Toyota production systems- KANBAN model, and elimination of waste.	**8**
Unit-6	**Project Management** Defining and organizing projects, feasibility study of projects, project planning, project scheduling- work breakdown structure, PERT & CPM, analyzing cost-time trade off, monitoring and controlling of projects.	**6**
	Total	**42**

Reference Book:	
1	Operations Management, Jay Heizer, Barry Render; Pearson learning, ISBN-0132863308, 2013.
2	Operations management for competitive advantage; Chase, Jacob, and Aquilano; TMH, ISBN- 0070604487, 2000.
3	Modern Production/Operations Management, Buffa and Serin, John Weily India, ISBN- 8126513721, 2007.
4	Operation Management, Krajewski and Ritzwan, Pearson Education.
5	Production and Operations Management, Adam, Jr. Elbert, PHI

Course Outcomes

CO1	To introduce students about industrial terminologies & functions.
CO2	To make inference between students and industry.
CO3	To give the direction to their thoughts towards industry.
CO4	Students will be able to study the concepts of Project management.
CO5	Students will be able to study the concepts and methods in production planning and control.
CO6	Able to acquire knowledge on facility, and problems associated the subject.

CO-PO/PSO Matrix

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	1	1	0	0	2	2	2	2	2	0	2	2	2	0	1
CO2	2	3	1	0	3	2	0	0	0	0	2	2	3	1	2
CO3	3	2	1	0	3	1	0	0	0	0	1	2	3	0	2
CO4	2	3	2	1	2	2	2	0	0	0	3	2	2	1	2
CO5	2	2	2	1	2	2	2	0	0	0	3	3	3	1	2
CO6	2	1	2	1	3	2	2	2	1	0	3	3	3	1	2