

GUJARAT TECHNOLOGICAL UNIVERSITY
MASTERS IN TECHNOLOGICAL MANAGEMENT-MTM
DUAL DEGREE PROGRAMME
Semester – X (W.e.f. December 2015)

SUBJECT NAME: Production Management
SUBJECT CODE: 4210102

COURSE OBJECTIVES:

Production/operations management involves the integration of numerous activities and processes to produce products and services in a highly competitive global environment. Many companies have experienced a decline in market share as a result of their inability to compete on the basis of product design, cost or quality. Most now agree that world class performance in operations, i.e., in product design, manufacturing, engineering and distribution, is essential for competitive success and long term survival. This course considers the operations from a managerial perspective. We will consider key performance measures of operations (productivity, quality and response time) as well as important concepts for improving the performance of operations along these dimensions. At the end of the course students will have a fair understanding of the role Production/Operations Management plays in business processes. Emphasis is given both to familiarization of various production processes and service systems, and to quantitative analysis of problems arising in the management of operations.

CONTENTS:

Module No:	Module Content	No. of Sessions	Marks (70 External exam)
I	Nature and Scope of Production and Operations Management; Types of Manufacturing Systems (production Processes), Strategy and Productivity.	7	17
II	Product design. Capacity planning. Process selection and facility layout. Material Handling –Principles- Equipments.	7	17
III	Management of quality, Quality control. Inventory management. Aggregate planning.	7	18
IV	Scheduling, MRP and ERP, JIT and lean operations. TQM and Six-sigma, Industrial Safety and safety management.	7	18
V	Practical Module: Visit any industrial unit and understand the processes performed in the unit. Use the theoretical knowledge to understanding the operations. Prepare a report on how the	8	(20 Marks of CEC Internal Evaluation)

	above concepts used in selected industrial unit under the guidance of your subject teacher.		
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TEXT BOOKS:

Sr. No.	Author	Name of the Book	Publisher	Edition
T1	William J. Stevenson.	Operations Management	Irwin / McGraw-Hill	Eighth Edition
T2	Russell, Roberta S. and Taylor, Bernard W.	Operations Management Along the Supply Chain,	John Wiley and Sons (Wiley India)	Latest Edition
T3	Chase R. B., Jacobs, F. R., Aquilano, N. J. and Agarwal N. K.,	Operations Management for Competitive Advantage	Tata McGraw Hill	Latest Edition
T4	Kanishka Bedi	Production and Operation Management	Oxford University Press	Latest Edition

REFERENCE BOOKS:

Sr. No.	Author	Name of the Book	Publisher	Edition
R1	Kachru Upendra	Production and Operations Management	Excel Books.	Latest Edition
R2	K. Aswathappa and K. Shridhara Bhat	Production and Operations Management	Himalaya Publications	Latest Edition
R3	Heizer, Jay and Render, Barry	Operations Management	Pearson Education	8th edition
R4	S. A. Chunawala, Dr. Patel	Production and Operations Management	Himalaya Publications	Latest Edition
R5	Martin K. Starr	Production and Operation Management	Cenagage Learning	Latest Edition
R6	Evans / Collier	Operation Management	Cenagage Learning	Latest Edition
R7	Buffa, Elwood S. and Sarin, Rakesh K	Modern Production and Operations Management	John Wiley	8th edition

List of Journals/Periodicals/Magazines/Newspapers, etc.

Productivity Journal, Indian Management, Business India, Supply Chain, etc.

Teaching Methods:

The course will use the following pedagogical tools:

- Discussion on concepts and issues in Operations management.

- Case discussion covering a cross functional work of production with other functional areas in both manufacturing and service industry.
- Projects/ Assignments/ Quizzes/ Class participation etc

SCHEME OF EVALUATION:

A	Projects/ Assignments/ Quizzes/ Individual or group presentation/ Class participation/ Case studies etc	Weight age 50 marks (Internal Assessment)
B	Mid-Semester Examination	Weight age 30 marks (Internal Assessment)
C	End –Semester Examination	Weight age 70 marks (External Assessment)

SESSION PLAN: The course duration is of 36 sessions of 75 minutes each, i.e. 45 hours.

Session Nos.	Topic
1-3	Introduction, Nature and Scope of Production and Operations Management
4	History of operations management
5-6	Types of Manufacturing Systems (production Processes),
7	Strategy and Productivity
8-11	Product design and Capacity planning
12-14	Process selection and facility layout
15	Material Handling –Principles-Equipments
16-17	Management of quality and Quality control
18-19	Inventory management
20-21	Aggregate planning
21-22	Scheduling
23-24	MRP and ERP
25-26	JIT and lean operations
27	Six-sigma
28	Industrial Safety and safety management
29-36	Practical Module: Visit any industrial unit and understand the processes performed in the unit. Use the theoretical knowledge to understanding the operations. Prepare a report on how the above concepts used in selected industrial unit under the guidance of your subject teacher