GUJARAT TECHNOLOGICAL UNIVERSITY

MASTER OF BUSINESS ADMINISTRATION (GTU'S Global Program)

Year – I (Semester – II) (W.E.F. January 2014)

Subject Name: Production and Operations Management (POM)

Subject Code: 2820006

1. **Course Objective:** The objective of the course is to:

   a) Understand the role of the operations management (OM) function in the functioning of an Organization
   b) Offer a broad survey of the concepts and tools used in operations management.

2. Course Duration: The course duration is of 36 sessions of 75 minutes each, i.e. 45 hours.

3. Course 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), Facility Location with examples; Facility Layouts; Layout Planning and Analysis; Line Balancing—Problems.	7	17
II	Understand the basis of inventory management decisions, the hierarchical approach to planning and various methods of inventory management. Capacity and aggregate production planning. Material Handling –Principles-Equipments.	7	17
III	Production Planning and Control, project management and operations scheduling (Gantt chart, CPM and PERT methods), Project crashing, Job sequencing (n-jobs on one machine and n-jobs on m-machines)	7	18
IV	Quality management, JIT and Lean manufacturing systems, TQM and Six-sigma, ISO 9000 and other ISO series, Statistical quality control, Acceptance Sampling, 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 above concepts used in selected industrial unit under the guidance of your subject teacher.	8	(20 Marks of CEC Internal Evaluation)

4. Teaching Methods:

The course will use the following pedagogical tools:

(a) Discussion on concepts and issues in Operations management.
(b) Case discussion covering a cross functional work of production with other functional areas in both manufacturing and service industry.
(c) Projects/ Assignments/ Quizzes/ Class participation etc

5. Evaluation:

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

6. Basic Text Books:

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

7. 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

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

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

9. Session Plan:

Session Nos.	Topic
1-3	Introduction to POM, Nature and Scope of Production and Operations Management, Production as transformation process, History of operations management, Production processes.
4-7	Facility Location with examples, Facility Layouts, Layout Planning and Analysis, Line
8-11	Understand the basis of inventory management decisions, the hierarchical approach to planning and various methods of inventory management.
12-13	Capacity and aggregate production planning.
14	Material Handling –Principles-Equipments.
15	Production Planning and Control

16-19	Project management and operations scheduling (Gantt chart, CPM and PERT methods), Project crashing,
20-21	Job sequencing (n-jobs on one machine and n-jobs on m-machines)
22-24	Quality management, JIT and Lean manufacturing systems, TQM and Six-sigma, ISO
25-27	Statistical quality control, Acceptance Sampling, Control Charts for variables and attributes
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