



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Business Administration (Part-Time), 3rd Semester

Subject Name: Production and Operations Management (POM)

Subject Code: 4539902

With effective
from academic
year 2019-20

1. Learning Outcomes:

Learning Outcome Component	Learning Outcome
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> Acquire the necessary knowledge and experience in order to recognize the production management and planning problems.
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	<ul style="list-style-type: none"> Ability to analyse and select the most appropriate methods and tools for the solution of problems related to production planning, shop floor scheduling and inventory control.

2. **Course Duration:** The course duration is of **40 sessions of 60 minutes** each.

3. Course Contents:

Module No:	Module Content	No. of Sessions	70 Marks (External Evaluation)
I	Introduction of Production & Operation Management: <ul style="list-style-type: none"> System and function view of organizations, scope, Evolution and future of production and operation management. Process design-different types of process with its merits and demerits, process classification based on order, process selection, different type of manufacturing process, process performance and evaluation etc. Product design; types of products and designing, evaluation of design 	10	17
II	Facility location; (theoretical concept only) Plant Layout: <ul style="list-style-type: none"> Different types of layout. Aggregate Production Planning (APP): <ul style="list-style-type: none"> Objective, strategies and cost of APP, master production schedule, Rough cut capacity planning etc.(theoretical concept only) Material Requirement Planning (MRP) (theoretical concept only) Inventory Management (theory and numerical)	10	18
III	Operations scheduling: <ul style="list-style-type: none"> Definition, Objectives, Types Sequencing (n-jobs on m machine) (theory and numerical) Queuing systems (Waiting Line Analysis) (theory and numerical) Line Balancing(theoretical concept only) Project management; Project scheduling by using network PERT/CPM, (theory and numerical) 	10	18
IV	Quality management: <ul style="list-style-type: none"> Definition, experts' views on quality. 	10	17



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	<ul style="list-style-type: none"> • Dimensions of quality. • Cost of quality and quality cost audit. • Statistical process control, control charts (theory and numerical), Total quality management (TQM), Six sigma, ISO 9000 and other ISO series. • Lean and Just in Time production system (theoretical concept only) <p>Industrial safety</p>		
V	<p>Practical</p> <ul style="list-style-type: none"> • Students should visit manufacturing / service organizations and <ul style="list-style-type: none"> ○ Identify the production planning and control systems, procedures and techniques. For service organizations, they can learn about how services are produced and how existing capacity is matched with demand. ○ Identify operations scheduling in any system and suggest more efficient ways of doing work. ○ Understand the significance of existing plant or service layouts. ○ Identify materials and inventory management practices in organized and unorganized sectors. ○ Simulate a production capability / facility with the optimum use and application of concepts. 	---	(30 Marks CEC)

4. Pedagogy:

- ICT enabled Classroom teaching
- Case study
- Practical / live assignment
- Interactive class room discussions

5. Evaluation:

Students shall be evaluated on the following components:

A	Internal Evaluation	(Internal Assessment- 50 Marks)
	• Continuous Evaluation Component	30 marks
	• Class Presence & Participation	10 marks
	• Quiz	10 marks
B	Mid-Semester examination	(Internal Assessment-30 Marks)
C	End –Semester Examination	(External Assessment-70 Marks)

6. Reference Books:

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1	Chase R. B., Jacobs, F. R., Aquilano, N. J. and Agarwal N. K.,	Operations Management for Competitive Advantage	TMH	Latest



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2	Kanishka Bedi	Production and Operation Management	Oxford	Latest
4	Roberta S. Russell, Bernard W. Taylor	Operations and Supply Chain Management	Wiley	Latest
5	Arun Kumar, N.MeenakshiP.	Production and Operation Management	Cengage	Latest
6	Heizer, Jay and Render, Barry	Operations Management	Pearson	Latest
7	Elwood S. Buffa and Rakesh K.Sarin	Modern Production and Operations Management	Wiley	Latest
8	David A. Collier, James R. Evans and Kunal Ganguly	Operation Management	Cengage	Latest
9	S. A. Chunawala, Dr. R. Patel	Production and Operations Management	Himalaya	Latest
10	Martin K. Starr	Production and Operation	Cengage	Latest

Note: Wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed.

7. List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.

1. International Journal of Production Economics
2. Journal of Production Research and Management
3. Journal of Operations Management