



(Master of Science in Quality and Productivity Management) (Master of Science)
(M. Sc.) (QPM) Semester (I)

Course Code	PS01CQPM54	Title of the Course	MANAGEMENT OF PRODUCTIVITY
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. Learn to observe and analyze an organization from a systems- or process-perspective.2. Learn to design, operate, and improve the systems that deliver goods and services through Production Management tools such as process flow diagrams, lean management, and decision trees.3. Effectively assess a well managed and well executed operations strategy.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Production and Operation functions – Understanding the relationship between production and other functions – Effect of time element on OM – Examples of manufacturing systems Integrated Production Management System, Productivity, Capital Productivity, Labour Productivity, Measures to enhance productivity. Managing change and innovation for increased productivity Capacity Planning, Location Planning, Job Evaluation, Value Analysis Designing the product – Need – Factors to be considered – Considerations during PLC – Standardisation – Modular design – Reliability	25
2.	Capacity Planning – Importance – Capacity measurement – Planning process for manufacturing and service industry Facility Planning – Location facilities – Location flexibility – Facility design process and techniques – Location break even analysis. Process Planning – Procedure – Characteristic of production process systems – Process from selection with PLC phases. Work Study – Significance – Methods, evolution of normal / standard time – Job design and rating	25
3.	Layout – Importance and function – Objectives – Flow patterns – Factors for good layout design procedure – REL Chart – Assembly line balancing PPC – Function – Planning phase, action phase, control phase – Aggregate production planning line of balance - Material requirement planning and control – Inventory control systems and	25





	techniques Production Planning, Optimised Production Technology, Computer-Aided Process Planning, Simulation Techniques, Computer Integrated Manufacturing, PPC in Supply Chain Management, Introduction to Scientific Inventory Management, Static and Dynamic Inventory Control Methods, Simulated Inventory System, Multi-Echelon Inventory System, Materials Requirement Planning	
4.	Total productive maintenance (TPM), : Optimal Order Quantity, EOQ, Economic Batch Quantity. ABC Analysis , VED Analysis, Timing Decisions: Production Planning and Control. Importance of time Horizon, Dovetailing of Plans, Production control, Assembly line Balancing. Scheduling. Shop loading & Index method Strategic Importance of Forecasting, Methods of Forecasting, Qualitative Methods of Forecasting, Associative Models of Forecasting, Accuracy of Forecasting, Estimation of Demand	25
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Teaching-Learning Methodology	Interactive Class Lectures, ICT Tools, Case Study and Short Assignment.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
2.	To implement Quality methodology to improve workplace morale, safety, and productivity inside a clean, organised, and high-performance environment.
3.	Understand how to create and execute standard operating procedures for developing





	reliable and repeatable processes in the safe, timely, and inexpensive manufacture of high quality products and services
4.	To employ total productive maintenance (TPM) to improve equipment availability, reliability, and overall effectiveness
5.	Ability to construct and apply a quick changeover and set-up time reduction program that's both profitable and adaptable to ongoing product and model changeovers.
6.	Improve production planning and scheduling in terms of flow and flexibility in order to increase efficiency, reduce costs, and ensure customer satisfaction.

Suggested References:

Sr. No.	References
1.	Prokopenko, J. (1987). Productivity Management: A Practical Handbook, International Labour Organization
2.	Mukherjee, P. N. and Kachwala, T. T.(2009). Operations Management And Productivity Techniques, PHI
3.	DMGT (2012), "Production and Operation Management" Excel book Private Limited, New Delhi.

On-line resources to be used if available as reference material

On-line Resources

Service Process Mumbai Dabbavalas <https://www.indiatoday.in/education-today/featurephilia/story/mumbai-dabbawalas-318051-2016-04-14>

Amul Process www.amul.org.

Beverage Process <https://www.coca-colacompany.com/company/coca-cola-system>

