Program	Master of Business Administration (MBA)	**Semester - 2**
Type of Course	-	
Prerequisite		
Rationale	-	
Effective From A.Y.	2024-25	

Teaching Scheme (Contact Hours)				Examination Scheme				
				Theory Marks		Practical Marks		
Lecture	**Tutorial**	**Lab**	**Credit**	**T**	**T**	**P**	**P**	**Total Marks**
4	-	-	4	50	30	-	-	150

***SEE** - Semester End Examination, **T** - Internal Theory, **P** - Internal Practical*

Course Content

T - Teaching Hours | **W** - Weightage

Sr.	Topics	T	W
1	**Module I** **World of Production Management:** Introduction to Production management, POM as a function of cost. SWOT analysis of Production and Manufacturing sector Scope of POM, and Process design-different types of process, different type of manufacturing process, process performance and evaluation etc. Product design; types of products and designing, Introduction to Operations Research, Introduction to OR and its applicability (Theoretical understanding only, preferable case analysis) **Industry 4.0 Concept with reference to:** Study of companies Quality Policy and efforts on Quality control and enhancement, Study of QC tools applied in the organization, Quality Management Guru's Philosophy, Understanding Value Stream Mapping concept, Understanding Poka Yoke and JIT concept, Productivity improvement (Lean) concepts in the organization which are applied from following, 5 S Kaizen.	**15**	**25**
2	**Module II** **Planning and Plant and Facility location (theoretical concept only)** Factors affecting the cost of production and plant location, Plant layout types **Understanding Aggregate Production Planning (APP):** master production schedule, rough cut capacity planning etc. (theoretical concept only), Material Requirement Planning (MRP)(theoretical concept only) **Inventory Management (theory and numerical)** Types of cost, Economic order quantity, Lead time and safety stock and differential discounting sums (Theory + Application oriented Sums, with formula sheet to be given to the students to test the application)	**15**	**25**
3	**Module III** **Operations scheduling:** Definition, Objectives, Types, Assignment and Sequencing (n-jobs on m machines) (theory and application oriented numerical, formula sheets can be given wherever required) Queuing systems (Waiting Line Analysis) (theory and numerical limiting to single queue single serving station base model, formula sheet can be given wherever required.) Project management; Project scheduling by using network PERT/CPM, Float and Slack calculations and crashing (theory and application oriented numerical, formula sheets can be given wherever required)	**15**	**25**
4	**Module IV**	**15**	**25**

Course Content

T - Teaching Hours | **W** - Weightage

Sr.	Topics	T	W
	SPC and SQC Statistical process control, control charts (theory and numerical with formula sheet to be given and application needs to be tested. Up to X bar and R charts from standard deviation and range) **Lean Manufacturing Concepts Such as (Theory Only)** Six Sigma, (Varius Belts and responsibilities), ZDZE (Zero defects and Zero errors), Artificial Intelligence in Production Processes, Theory of Constraints, TPM concept, Understanding GEMBA, Root Cause Analysis and 5W + 1H Concept of problem solving, Various Dimensions of Quality and Cost of quality, views of Quality Gurus, Understanding and critically evaluating EHS policies of companies. Study of various types of plant layouts.		
	Total	**60**	**100**

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy

Level	Understanding	Application	Analyze
Weightage	25	50	25

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes

At the end of this course, students will be able to:	
CO1	Understanding need and importance of Production and operations research and planning of production management in terms of cost function, Issues and Challenges.
CO2	Inventory management concept and its impact on cost and applicable ways to reduce the cost
CO3	Project planning and execution, Job sequencing to reduce time and cost
CO4	Quality, safety and productivity, and technology in Industry 5.0

CO PO Mapping

CO	CO - 1	CO - 2	CO - 3	CO - 4
PO - 1	3	2	2	2
PO - 2	2	3	2	2
PO - 3	1	3	2	2
PO - 4	1	2	2	3
PO - 5	1	1	2	3

Reference Books

1.	**Operations Management for Competitive Advantage (TextBook)** By Chase R. B., Jacobs, F. R., Aquilano, N. J. and Agarwal N. K. | TMH | Latest
2.	**Production and Operations Management (TextBook)** By By Kanishka Bedi | Oxford University Press | Latest Edition
3.	**Operations and Supply Chain Management** By Roberta S. Russell, Bernard W. Taylor | Wiley Publication | Latest
4.	**Production and Operations Management** By S. A. Chunawala, Dr. R. Patel | Himalaya Publication House | Latest