Department of Master of Business Administration
Subject:- Service operation management
Subject Code: MANB503P

Course Outcome (CO's)

- Student understood comprehensive understanding of service operations management princip concepts, and frameworks.
- Students got the Knowledge of Aggregate Capacity Planning for Services & Facility Location Layout for Services
- Students Analyzed the Operations Standards and work Measurement, Measurement and Contro quality of Services
- Students understood the Dynamics of Service Delivery System.
- Students understood strategies and techniques for managing service quality, including ser standards, service recovery, customer feedback mechanisms.
- Students demonstrated knowledge of role of supply chain management in service operati including supplier management, inventory control, and logistics coordination to ensure tim delivery of service inputs and resources.

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Department of Master of Business Administration
Subject:- Service operation management
Subject Code: MANB503P

Program Specific Outcome (PSO's)

- Student understood comprehensive understanding of service operations management princip concepts, and frameworks, including the unique characteristics of services, service deliv processes, and service value creation..
- Students understood the process of designing and developing service offerings, including serv blueprinting, service process design, and service innovation to meet customer needs and preferenc
- Student understood differences and similarities between manufacturing and service operati including differences in production processes, customer interactions, inventory management, quality assurance.
- Student acquired skills strategies and techniques for managing service quality, including serv standards, service recovery, customer feedback mechanisms, and continuous improvement initiati to enhance customer satisfaction and loyalty.
- Students Acquired skills and analyzing the matrix of service characteristics, including intangibi perishability, inseparability
- Students Developed skills techniques for aggregate capacity planning in services, including dem forecasting
- Students understood the the importance of facility location and layout decisions in serv operations, including factors such as customer proximity, accessibility, visibility
- Students understood operations standards and conduct work measurement studies to quantify evaluate productivity, efficiency, and performance in service operations
- Students understood the designing jobs that prioritize employee safety and well-being w optimizing productivity and performance. They will understand the principles of ergonomic des workplace safety regulations
- Students developed dynamics involved in service delivery systems, including service proces customer interactions, service variability, and service value creation
- Students understood. techniques for scheduling service personnel and vehicles to meet custo demand while minimizing wait times, travel distances, and resource idle time.
- Students learned to the principles of waiting-line analysis and queuing theory to analyze and optin waiting times in service operations.

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- Students understood in designing, implementing, and managing product-support services to enha customer satisfaction, increase product reliability.
- Students understood strategies for maintaining service assets, equipment, and infrastructure to ens reliability, availability, and performance.
- Students Acquired skills inventory control and management for service-oriented organizati including spare parts management, stock replenishment, and inventory optimization.

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Department of Master of Business Administration
Subject:- Service operation management
Subject Code: MANB503P

Program Outcome (PO's)

- Apply knowledge of management theories and practices to solve business problems
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- Adapt life-long learning and professional development to enrich knowledge and competencies
- Apply Knowledge of creative and innovative strategic and entrepreneurship

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Department of Master of Business Administration
Subject:- Applied operation Management
Subject Code: MANB504P

Course Outcome (CO's)

- Student developed a comprehensive understanding of the fundamental concepts, principles, and techniques of operations research.
- Students got the Knowledge of mathematical models to represent real-world decision-making problems in various fields
- Students Analyzed the optimization techniques such as linear programming, integer programming, nonlinear programming, and network optimization to solve complex decision-making problems
- Students understood. simulation models and use stochastic modeling techniques such as Monte Carlo simulation and queuing theory to analyze and improve system performance, reliability, and efficiency.
- Students demonstrated knowledge replacement models, including equipment replacement decisions, replacement policies, and economic analysis of replacement alternatives

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Department of Master of Business Administration
Subject:- Applied operation Management
Subject Code: MANB504P

Program Specific Outcome (PSO's)

- Students understood the interpreting sensitivity analysis results and understanding the implications for decision-making
- Students understood parametric analysis techniques in linear programming, including varying objective function coefficients
- Student acquired skill experience with sensitivity analysis software tools and optimization packages such as Excel Solver.
- Students understood to inventory control models that incorporate uncertainty factors such as demand variability, lead time variability, and supply disruptions
- Students developed skills inventory control models under uncertainty to real-world inventory management problems in various industries such as manufacturing
- Students Acquired skills optimization techniques for inventory control under uncertainty, including robust optimization, stochastic programming, and real options analysis
- Students Developed skills queuing theory and its applications in analyzing and optimizing service systems, including waiting lines, service capacity, and resource utilization.
- Students understood the performance of queuing systems using performance measures such as queue length, waiting time, system throughput, and service level
- Students understood non-linear optimization techniques for solving optimization problems with non-linear objective functions and constraints.
- Students understood the network models and non-linear optimization techniques to solve engineering and management problems, including facility location, network design, resource allocation, .
- Students developed optimization techniques such as mean-variance optimization, quadratic programming, and linear programming to construct optimal portfolios that maximize expected returns or minimize risk subject to constraints such as budget constraints, minimum return requirements, and risk tolerance levels.
- Students understood queuing theory and its applications in analyzing and optimizing service systems, including waiting lines, service capacity, and resource utilization.
- Students learned to performance of queuing systems using performance measures such as queue length, waiting time, system throughput, and service level.
- Students understood quadratic programming, including the formulation of quadratic objective functions and linear constraints. They will analyze the properties of quadratic programming problems and apply appropriate optimization techniques to solve them efficiently

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- Students understood quadratic programming techniques to real-world optimization problems in various domains such as finance, engineering, economics, and operations research.
- Students Acquired skills the portfolio management problem and its key components, including asset selection, asset allocation, risk assessment, and portfolio optimization.

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Department of Master of Business Administration
Subject:- Applied operation Management
Subject Code: MANB504P

Program Outcome (PO's)

- Apply knowledge of management theories and practices to solve business problems
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- Adapt life-long learning and professional development to enrich knowledge and competencies
- Apply Knowledge of creative and innovative strategic and entrepreneurship

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Department of Master of Business Administration
Subject:- Logistic Management
Subject Code: MANB505P

Course Outcome (CO's)

- Student understood the principles, concepts, and functions of logistics management.
- Students got the Knowledge logistics strategies aligned with organizational goals and objectives, considering factors such as customer service requirements, cost constraints, supply chain dynamics, and competitive pressures
- Students Analyzed the the importance of supply chain integration in logistics management and develop skills in coordinating activities with suppliers, manufacturers, distributors
- Students understood learn to manage transportation operations effectively, including mode selection, carrier management, route optimization, freight consolidation
- Students understood procurement principles and techniques, including sourcing strategies, supplier selection, contract negotiation and logistic analysis &its audit.
- Students demonstrated knowledge the challenges and opportunities of global logistics and trade, including international shipping, customs clearance, trade compliance, and risk management, to facilitate international trade and expand market reach.

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Department of Master of Business Administration
Subject:- Logistic Management
Subject Code: MANB505P

Program Specific Outcome (PSO's)

- Students understood the logistics concepts, including transportation, warehousing, inventory management, and distribution, and their role in facilitating the flow of goods and services
- Students understood the interface between logistics and marketing functions, including the role of logistics in supporting marketing strategies such as product availability, delivery speed
- Student acquired skills interface between logistics and production operations, including the coordination of materials sourcing, production scheduling, inventory management
- Students understood to about transportation and distribution strategies to optimize the movement of goods from production facilities to distribution centers and from distribution centers to customers
- Students developed skills the role of transportation systems in logistics management, including the selection of transportation modes, routing, scheduling
- Students Acquired skills about dispatch and routing decisions in logistics operations, including route planning, vehicle scheduling, dispatching orders, and load optimization, to minimize transportation costs,
- Students Developed skills real-world examples of physical distribution, transportation systems, and routing decisions in various industries and sectors.
- Students understood the about packaging and materials handling practices in warehousing operations, including packaging design, labeling, palletization, unitization
- Students understood warehouse design principles, layout optimization techniques, and space utilization strategies to maximize storage capacity, minimize travel distances, and streamline material flow within warehousing and distribution centers.
- Students understood the about value-added services offered in warehousing and distribution centers, such as kitting, labeling, assembly, customization, and reverse logistics, to enhance customer satisfaction, add value to products, and support supply chain flexibility.
- Students developed a comprehensive understanding of key performance indicators (KPIs) and metrics used to measure logistics performance, including measures related to cost, service, quality
- Students understood about logistics audit methodologies and techniques for evaluating the performance and effectiveness of logistics systems, processes, and practices.
- Students learned to skills in performance measurement and benchmarking to compare logistics performance against industry standards, competitor benchmarks, and internal targets
- Students understood the principles, concepts, and practices of international logistics management, including the coordination of global supply chains, international trade regulations.
- Students understood to coordinate global supply chains across multiple countries, regions, and time zones

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Department of Master of Business Administration
Subject:- Logistic Management
Subject Code: MANB505P

Program Outcome (PO's)

- Apply knowledge of management theories and practices to solve business problems
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- Adapt life-long learning and professional development to enrich knowledge and competencies
- Apply Knowledge of creative and innovative strategic and entrepreneurship

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Department of Master of Business Administration
Subject:- Purchasing And Materials Management
Subject Code: MANB502P

Course Outcome (CO's)

- Students understood the fundamental concepts and principles of purchasing and materials management, including their role in supporting organizational objectives and supply chain efficiency.
- Students got the Knowledge of Utilize inventory management techniques, such as Economic Order Quantity (EOQ), Just-In-Time (JIT), and Material Requirements Planning (MRP), to optimize inventory levels and minimize holding costs
- Students Analyzed the procurement process from vendor selection to contract negotiation, considering factors such as cost, quality, lead time, and supplier reliability.
- Students understood the Receiving& incoming quality inspection .
- Students understood Value Analysis and Engineering, Make or Buy Decisions, Purchasing Research, Sources of Supply .
- Students demonstrated knowledge of legal aspect of purchasing, public Purchasing and Tendering; International Purchasing-Procedures and Documentation.
- Students got the overview knowledge of material logistics , ware house management & inventory control,.

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Department of Master of Business Administration
Subject:- Purchasing And Materials Management
Subject Code: MANB502P

Program Specific Outcome (PSO's)

- Students understood the fundamental concept of Purchasing And Materials Management concepts, principles and its overview.
- Students understood demonstrate proficiency in strategic sourcing techniques, including supplier identification, evaluation, selection, and relationship management, to optimize procurement processes and ensure a reliable supply of materials.
- Student acquired skills of procurement processes, including strategic sourcing, vendor evaluation and selection, negotiation techniques, and contract management.
- Students understood to manage costs effectively throughout the procurement process, including cost analysis, cost reduction strategies, and total cost of ownership (TCO)
- Students developed skills in cost analysis, negotiation, and contract management to achieve cost savings, mitigate risks, and enhance value in purchasing transactions.
- Students Acquired skills of proficiency in strategic sourcing techniques, including supplier identification, evaluation, selection, and relationship management, to optimize procurement processes and ensure a reliable supply of materials.
- Students Developed skills to assess and select suppliers based on criteria such as cost, quality, reliability, responsiveness, and ethical practices.
- Students understood the vendor rating process for quality of vendor selection .
- Students understood the importance of inventory management in balancing supply and demand, minimizing costs, and optimizing operational efficiency.
- Students understood the interconnectedness of material management with other supply chain functions.
- Students developed and implement effective measure for material management schedules that optimize resource utilization, minimize lead times, and meet customer demand while considering constraints such as capacity and inventory levels.
- Students understood warehouse operations, including receiving, put-away, picking, packing, shipping, and inventory management processes.
- Students learned to ensure compliance with safety regulations, occupational health standards, and industry-specific regulations related to warehouse operations and materials handling.
- Students understood the unique challenges, principles, and best practices associated with managing spare parts inventory.

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- Students understood proficiency in various material handling techniques, including manual handling, mechanized handling, automated handling, and robotics, to optimize the movement, storage, and control of materials within a facility.
- Students understood principles of traffic management within facilities, including layout planning, signage, pedestrian safety measures, and traffic flow optimization to ensure smooth movement of materials and personnel.

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Department of Master of Business Administration
Subject:- Purchasing And Materials Management
Subject Code: MANB502P

Program Outcome (PO's)

- Apply knowledge of management theories and practices to solve business problems
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- Adapt life-long learning and professional development to enrich knowledge and competencies
- Apply Knowledge of creative and innovative strategic and entrepreneurship

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Department of Master of Business Administration
Subject:- Production planning Control
Subject Code: MANB501P

Course Outcome (CO's)

- Students understood the fundamental concepts of Production planning & control including its role in optimizing resource utilization, minimizing costs, and meeting customer demand.
- Students understood the Aggregate planning & job shop production .
- Students demonstrated knowledge of inventory Management system & forecasting .
- Students got the overview knowledge of material management material planning,.
- Students got the Knowledge of Utilize inventory management techniques, such as Economic Order Quantity (EOQ), Just-In-Time (JIT), and Material Requirements Planning (MRP), to optimize inventory levels and minimize holding costs.
- Students Understood Analyze the impact Application of ERP system on manufacturing as well as other sector.

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Department of Master of Business Administration
Subject:- Production planning Control
Subject Code: MANB501P

Program Specific Outcome (PSO's)

- Students understood the fundamental concept of Production planning control concepts, principles.
- Students understood different types of production systems, including their characteristics, advantages, and limitations, such as make-to-stock, make-to-order, and assemble-to-order.
- Student acquired skills of production planning strategies that optimize resource utilization, minimize costs, and meet customer demand, considering factors such as capacity constraints, lead times, and inventory levels.
- Student applied various forecasting techniques to predict demand patterns accurately, including quantitative methods (e.g., time series analysis, regression analysis) and qualitative methods (e.g., market research, expert judgment)..
- Students Acquired skills in various production planning techniques such as Material Requirements Planning (MRP), Master Production Scheduling (MPS), and Capacity Requirements Planning (CRP).
- Students expertise in inventory management techniques, including ABC analysis, Just-In-Time (JIT) inventory systems, and safety stock optimization, to ensure optimal inventory levels while minimizing holding costs.
- Students understood production schedules that line of balance production capacity with demand variability, ensuring efficient use of resources while meeting customer delivery requirements
- Students understood and procedure and documentation of production planning control.
- Students developed and implement effective production schedules that optimize resource utilization, minimize lead times, and meet customer demand while considering constraints such as capacity and inventory levels.
- Students Learned production control systems such as Kanban, Manufacturing Execution Systems (MES), and Shop Floor Control to monitor production progress, identify bottlenecks, and ensure adherence to production schedules.
- Students understood the importance of continuous improvement in production planning and control processes and will be able to lead and participate in improvement initiatives such as Kaizen events and Six Sigma projects.
- Students understood the interconnectedness of production planning and control with other supply chain functions.

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- Students Acquired skills to achieved high volume standardize product and its measure .
- Students understood Quality assurance and statistical process control .
- Students understood the ERP System and continuous improvement initiatives in ensuring product quality and customer satisfaction.

- Students developed strong collaboration and communication skills to work effectively with cross-functional teams, including operations, logistics, procurement, and marketing, to align production plans with business objectives and customer requirements.

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Department of Master of Business Administration
Subject:- Production planning Control
Subject Code: MANB501P

Program Outcome (PO's)

- Apply knowledge of management theories and practices to solve business problems
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.
- Adapt life-long learning and professional development to enrich knowledge and competencies
- Apply Knowledge of creative and innovative strategic and entrepreneurship

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Department :- Master of Business Administration
Subject:- World class manufacturing
Subject Code: MANB506P

Course Outcome (CO's)

- Student understood the principles, concepts, and practices of World Class Manufacturing, including its origins, evolution, key characteristics, and the role it plays in achieving operational excellence.
- Students got the Knowledge of about the core principles and philosophies of WCM, including Total Quality Management (TQM), Lean Manufacturing, Just-in-Time (JIT) production, Total Productive Maintenance (TPM), and Continuous Improvement (Kaizen), and their application in achieving operational excellence, waste reduction, and quality improvement.
- Students Analyzed the role of technology and innovation in WCM, including the adoption of Industry 4.0 technologies such as Internet of Things (IoT)
- Students Analyzed the importance of quality management in WCM and learn techniques such as Six Sigma, Statistical Process Control (SPC), Failure Mode and Effects Analysis (FMEA), and Poka-Yoke (Error Proofing) to ensure product quality, reduce defects, and enhance customer satisfaction.
- Students understood the of proficiency in lean manufacturing practices such as Value Stream Mapping (VSM), 5S (Sort, Set in order, Shine, Standardize, Sustain), Kanban, Kaizen events, and Continuous Flow to eliminate waste, improve process efficiency, and create value for customers.
- Students developed skills in performance measurement and continuous improvement techniques such as Key Performance Indicators (KPIs), Gemba Walks, Root Cause Analysis, and Plan-Do-Check-Act (PDCA) cycles to monitor performance, identify opportunities for improvement, and drive sustainable growth in WCM.

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Department :- Master of Business Administration
Subject:- World class manufacturing
Subject Code: MANB506P

Program Specific Outcome (PSO's)

- Students understood the principles, practices, and characteristics of a World Class Manufacturing (WCMo) environment, including its focus on customer satisfaction, continuous improvement, waste elimination, and employee empowerment
- Students understood to evaluate and select appropriate technologies, capacities, layouts, and automation solutions for material handling systems based on factors such as product characteristics, production volume, process flow, space constraints, and cost considerations.
- Students understood about Manufacturing Resources Planning (MRP-II) software tools and their integration with other enterprise systems such as ERP, CRM, and SCM to support end-to-end manufacturing processes, including production planning, inventory management, shop floor control, and financial management.
- Students developed skills Application of 5-S and Kaizen: Graduates will learn to implement 5-S (Sort, Set in order, Shine, Standardize, Sustain) and Kaizen (continuous improvement) principles to organize the workplace, improve workflow, enhance efficiency, and foster a culture of continuous improvement and employee empowerment.
- Students Acquired skills of Kanban systems and their role in JIT production environments, including the design and implementation of Kanban cards, bins, boards, and signals to regulate the flow of materials, reduce lead times
- Students Acquired skills the principles and practices of the Toyota Production System (TPS), including Just-in-Time production, Jidoka (autonomation), and continuous improvement (Kaizen),
- Students Developed skills to gain knowledge of Statistical Quality Control (SQC) techniques such as Acceptance Sampling, Inspection Plans, Statistical Process Control
- Students understood the 7 qc tool by using TQM Technique.
- Students understood the Total Quality (TQ) concept, which emphasizes the integration of quality management practices across all functions and levels of an organization, from product design and development to manufacturing, distribution, and customer service.
- Students understood the requirements and principles of ISO-9000 standards for quality management systems and learn to apply ISO-9000 standards

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- Students understood importance of total employee involvement and small group activities in achieving organizational quality objectives
- Students understood Total Quality Management (TQM) and safety management principles to create a culture of safety, risk management, and accident prevention in organizations
- Students learned to. role of automation technologies such as Computer-Aided Design (CAD), Computer-Aided Manufacturing (CAM), Robotics, and Artificial Intelligence (AI) in improving design accuracy, production efficiency
- Students understood the Compliance with ISO/TS 16949: Students will learn about ISO/TS 16949, a technical specification for automotive quality management systems, and understand its requirements for quality management in the automotive industry

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Department :- Master of Business Administration
Subject:- World class manufacturing
Subject Code: MANB506P

Program Outcome (PO's)

- Apply knowledge of management theories and practices to solve business problems
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
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