

Operations Management - SEM III (2024-25)

I) Course Content:

Semester	III Core
Subject	Operations Analytics
Course Code	MMSOC402 (RGCMS)
Credits	4
Duration	40

Prerequisites if any	Operations Management, Operations Research, Statistics for Management,
Connections with Subjects in current orFuture courses	Supply Chain Management, MRPC, Materials Management

Learning Objective	
1 To understand basic aspects of analytics and evaluation	
2 To learn various analytical techniques applied in complex real-life situations	
3 To be able to scale up an academic model to workable practical model by carrying the process of analytical framework.	

Module

Sr. No.	Content	Activity
1.	Introduction Gaining data insights and Predictive Analytics; Introduction to analytics, Demand analytics-qualitativeforecasting	Lecture, examples on excel, cases
2.	Demand analytics Quantitative forecasting, Moving average, exponential smoothing, trend, regression adjusted with seasonality, double exponential smoothing, optimum values of period of MA & smoothing constant	Lecture, examples on spread sheets, cases
3.	Measures of accuracy in forecasting In terms of MAD, MSE, MAPE & tracking signal.	Lecture, examples on spread sheets, cases
4.	Service analytics in waiting line Single & multi-server, use of simulation and customerservice efficiency, cost optimization	Lecture, examples on spread sheets, cases
5.	Service analytics in Retail, Stocking policy and impact of stock-out, use of simulation, service efficiency, & cost optimization	Lecture, examples on spread sheets, cases
6	Supply Chain Analytics: Supply Chain Metrics, Decision areas in SCM Procurement, Manufacturing, Distribution, Logistics	Lecture, examples on spread sheets, cases
7	Supply Chain Analytics & Risks Risk & performance indices wrt cost, capacity, quality,logistics & distribution etc	Lecture, examples on spread sheets, cases
8	Types of Reports: Summary Reporting, Detailed, Functional, Multi-view,Drill Down, Utility View, Process View	Lecture, examples on spread sheets, cases
9	Performance Metrics: Inventory, Fulfillment, Alerts, and Flagging etc. DashboardDesigning, Balanced Scorecard: Kaplan and Norton Framework, Strategy Map, Scorecard Design.	Lecture, examples on spread sheets, cases

Operations Management - SEM III (2024-25)

Text books

Sr. No.	Books
1	Business Analytics: Practitioner's Guide Rahul Saxena and Anand Srinivasan

Reference Books

Sr. No.	Books
1.	Business Analytics- An Introduction Jay Leibowitz

Assessment	
Internal	Internal 40%
Semester end	Semester end 60%

Code	Course Outcome	Cognition
MMSOC302.1	Understand the importance of data, data analysis and data analytics in managing businesses. To overcome the business challenges by forecasting the sales (demand)	Understand
MMSOC302.2	To remove in-accuracies in demand forecasting by matching up with different demand forecasting methods. To understand the service dynamics / efficiency w.r.t. business/ operations management and customer management	Analyze
MMSOC302.3	To learn the management of service operations in retail/ material management organization. To understand and identify the key details in supply chain related measurement	Analyze
MMSOC302.4	To understand the risks in managing Supply Chain of organization. To understand reporting system in an business organization	Understand
MMSOC302.5	To understand the overall organization/ business performance parameters of performance	Apply