



Dr. V. N. Bedekar Institute of Management Studies, Thane
Teaching Plan (MMS / PGDM)
Academic Year (2014-15)

Programme: MMS

Name of the Course: Quantitative Methods in Operations

Maximum marks: 100

No. of Sessions: 13

Name of the Faculty : Manish V

Mobile No:

Email:

Weblink:

Reference Books:

1. Operations Research – An Introduction by Hamdy Taha, Prentice Hall
 2. Quantitative techniques in Management by N. D. Vohra, Tata McGraw Hill
 3. Quantitative Methods/Operations Research by Banerjee
 4. Quantitative Methods/Operations Research by Hira Gupta
 5. Quantitative Methods/Operations Research by V. Kapoor
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Plan:

Session No	Topics to be covered	Pedagogy	Remark
1	Linear Programming - Sensitivity Analysis - Parametric Programming - Industrial Applications Transshipment Model	PPT, whiteboard, articles from operations magazines.	
2	Generalized Transportation Model - Capacitated Transportation Model	PPT, whiteboard	
3	Goal Programming Concepts - Formulation of Multiple Goal Model - Goals Equality Ranked, Priority Ranking of Goals (non - conflicting Goals - Conflicting Goals) Weighted priority ranking of Goals - Computational approaches to Goal Programming, Applications of Goal Programming	PPT, whiteboard, articles from operations magazines.Reconfiguration,	



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		Restructuring examples	
4/5	Waiting Line Models - Single server queues in series and parallel for Erlang Services Time Distributions - Multi Server queues in series and parallel for negative exponential service time distributions - machine Interference - Case Examples - Use of Finite queuing tables for practical problems - Non - Poisson inputs and outputs and time dependent queues – Caste Studies.	PPT, whiteboard, articles from operations magazines.	
6	Advanced Inventory Models – EOQ models with non instantaneous replacement and shortages, EOQ for multiple items with space, investment and quantity constraints	Presentation, problem solving, discussions, case study	
7	Probabilistic inventory models – Continuous review model, Single period model, multi period Model	Presentation, problem solving, discussions, case study	
8	Performance Measurement of design project Framework of Technology Management Process Choice	Presentation, problem solving, discussions, case study	
9	Business Implication of process choice – project, jobbing, line, batch, continuous .Technology strategy- flexibility, push vs pull Technological opportunities	Presentation, problem solving, discussions, case study	
10	Integer programming - Formulations of I P Models - Geomory's algorithm for the all integer problem - Algorithm for mixed inter contiguous variables - Zero - one problems - Implicit Enumeration algorithm - Applications.	PPT based lecture, Video clippings, discussion and Q & A session.	
11	Dynamic Programming – Dynamic versus linear Programming, Applications – Knapsack model, Workforce size model, Equipment replacement model, Investment model, Inventory models - Working and Cases	PPT based lecture, Video clippings, discussion and Q & A session.	
12	Use of Computer in OR Studies - Standard available packages - Interpretation of computer outputs - Organizing for OR in an establish merit - OR in corporate planning.	Objective Test II	



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13	Case Studies and Presentations	PPT and whiteboard.	
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I) Internal:

Component	Details	Marks
Class Test	Two tests of 5 marks each	10
Presentation	Project Presentation	20
Case Study		
Participation	Attendance and class participation	10
Others		

Manish V

Signature of Faculty

Signature of Co-ordinator