



M.B.A. Semester II
PM02CMBA51: QUANTITATIVE TECHNIQUES IN MANAGEMENT -II

Course Code	PM02CMBA51	Title of the Course	QUANTITATIVE TECHNIQUES IN MANAGEMENT -II
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To build capabilities in the students for analyzing different situations in the industrial/ business scenario involving limited resources and finding the optimal solution within constraints.2. To inculcate and develop logical reasoning and aptitude to make the students well equipped to work on complex issues.3. To impart comprehensive knowledge and understanding of theoretical fundamentals in Operational Research.
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Course Content: 30 sessions		
Unit	Description	Weightage (%)
1.	Management Science – Basic concepts and its role in decision making, Linear Programming: Graphical Method, Simplex Method; Dual of LP	25
2.	Sensitivity Analysis; Transportation and Transshipment Models; Assignment Problem and Routing Problems;	25
3.	Integer Programming - Branch and Bound Algorithm. Network Analysis; Game Theory, Queuing Theory	25
4.	PERT/CPM; Decision Theory and Decision Trees, Goal Programming, Simulation, Dynamic Programming	25

Teaching-Learning Methodology	Class session, Assignments, Discussion, Case Studies, Quiz, and projects
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Syllabus with effect from the Academic Year 2021-2022

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination	30%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance	30%
3.	University Examination	40%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Analyse any business system with limited constraints and depict it in a model form.
2.	Convert the business problem into a mathematical model.
3.	Solve the mathematical model manually and use soft resources/software such as solver, etc.
4.	Simulate different business probabilistic situations using the Monte Carlo simulation technique.
5.	Enhance employability.

Suggested References:	
Sr. No.	References
1.	N.D Vohra, Quantitative Techniques in Management Tata McGraw-Hill, Latest Edition
2.	Taha, H A, Operations Research - An Introduction Prentice Hall of India Private Limited, N. Delhi, Latest Edition.
3.	J. K. Sharma, Operations Research- Theory and applications Macmillan India Ltd, latest edition.
4.	Ravindran, A., Phillips, D. T and Solberg, J. J., Operations Research: Principles and Practice, John Willey and Sons, latest edition.



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On-line Resources

NPTEL Course on Operations Research https://nptel.ac.in/courses/111/107/111107128/
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NPTEL Course on Introduction to OR https://nptel.ac.in/courses/110/106/110106062/

All such journals are available from http://www.spuvvn.edu/administration/service_centres/library/open_sources/free_ejournals
