

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**COURSE PLAN (November 2024 – April 2025)**

**Department** : **Mathematics**  
**Name of the Faculty** : **Dr. V. Dhanlakshmi**  
**Course Title** : **Resource Management Techniques**  
**Course Code** : **23MT/GE/RT22**  
**Shift** : **I**

**COURSE OUTCOMES (COs)**

COs	Description	CL
CO1	define the basic terminology and concepts used in operation research, transportation, assignment and in networks	K1
CO2	understand the formulation of Mathematical problem in transportation, assignment problem and project network	K2
CO3	apply transportation problem, assignment problem and critical path problem to real world situation	K3

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Nov 18 – 25, 2024 (Day Order 1-6)	1	<b>Introduction to Operations Research (OR)</b> 1.1 Introduction 1.2 Role of OR in Business, Management and Engineering 1.3 Classification of Models 1.4 Some Characteristics of a Good Model	K1-3	2	CO1-3	Lecture	Questioning

		1.5 Principles of Modelling 1.6 General Methods for Solving OR Models					
Nov 26- Dec 3, 2024 (Day Order 1 to 6)	1	<b>Introduction to Operations Research (OR)</b> 1.7 Main Phases of OR 1.8 Limitation <b>Transportation Model</b> 1.9 Introduction 1.10 Standard Transportation Table 1.11 Method for Finding Initial Basic Feasible Solution-North West Corner Rule	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning
Dec 4-11, 2024 (Day Order 1 to 6)	1	<b>Transportation Model</b> 1.11 Method for Finding Initial Basic Feasible Solution-North West Corner Rule and Least Cost Method	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning
Dec 12-19, 2024 (Day Order 1 to 6)	1	<b>Transportation Model</b> 1.11 Method for Finding Initial Basic Feasible Solution- Least Cost Method and Vogel's Approximation Method	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning
Jan 3 – 7, 2025 (Day Order 3 to 6)	1	<b>Transportation Model</b> 1.11 Method for Finding Initial Basic Feasible Solution- Vogel's	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning & <b>Component -1 Assignment</b> (10 marks)

	2	Approximation Method (contd.)  <b>Assignment Problem</b> 2.1 Introduction					
Jan 8 – 17, 2024 (Day Order 1 to 6)	2	<b>Assignment Problem</b> 2.2 Hungarian Method	K1-3	2	CO1-3	Lecture & Problem Solving	
Jan 18 - 23, 2025	<b>C.A. Test - I</b>						
Jan 24 -31, 2025 (Day Order 1 to 6)	2	<b>Assignment Problem</b> 2.3 Unbalanced Assignment Models	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning
Feb 3-8, 2025 (Day Order 1 to 6)	2	<b>Assignment Problem</b> 2.4 Traveling Salesman Problem	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning & <b>Component Test-2</b> (25 marks) Sections:1.11, 2.2,2.3
Feb 10– 18, 2025 (Day Order 1 to 4)	2	<b>Assignment Problem</b> 2.4 Traveling Salesman Problem (contd.)	K1-3	1	CO1-3	Lecture & Problem Solving	Questioning
Feb 19- 26, 2025 (Day Order 1-6)	3	<b>Project Network Analysis</b> 3.1 Introduction 3.2 Basic Terminologies	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning
Feb 27- Mar 6, 2025	3	<b>Project Network Analysis</b> 3.3 Rules for constructing a Project Network 3.4 Network Computations -	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning

(Day Order 1 to 6)		CPM					
Mar 12 –17, 2025	<b>C.A. Test - II</b>						
Mar 18 – 20, 2025 (Day 4 to 6)		<b>Project Network Analysis</b> 3.4 Network Computations - CPM (contd.)	K1-3	2	CO1-3	Lecture & Problem Solving	<b>Questioning &amp; Component Test-3</b> (15 marks) Sections: 3.2-3.4
Mar 21 - 28, 2025 (Day Order 1 to 6)		<b>Project Network Analysis</b> 3.4 Network Computations - CPM (contd.)	K1-3	2	CO1-3	Lecture & Problem Solving	Questioning
Mar 29- April 2, 2025 (Day Order 1 to 3)	<b>REVISION</b>						