1.	Title of the course	Operations Research
2.	Course number	MA622L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To MA6034/12
6.	To be offered by	Department of Mathematics and Statistics
7.	To take effect from	January 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To impart a broad knowledge of techniques of solving problems that appeared in operations research models with applications to related areas in academics and industries. To discuss the methods of solving linear programming problems including transportation and assignment problems along with their graphical representations. To solve problems related to game theories, queuing theories, and inventory models.	
10.	**Course Content:** Introduction to Operations Research (OR) models, linear programming problems (LPP), graphical methods for solving LPP, convex sets, the simplex method, Big M method, solutions of LPP, primal and dual problems, dual simplex method, transportation problems, unbalanced transportation problems, degeneracy, assignment problems, optimal solutions of assignment problems, sensitivity analysis, network models, advanced linear programming algorithms, supply chains, inventory modeling, decision analysis, decision under risk, decision under uncertainty, two-person zero-sum games, mixed strategy games, single server, multiple server queuing models, M/M/R queuing models.	
11.	**Textbook(s):** 1. Taha H A, *Operations Research: An Introduction*, 10th Edition, Pearson (2017).	
12.	**Reference(s):** 1. Eiselt H A, Sandblom C L, *Operations Research: A Model-Based Approach*, 2nd Edition, Springer-Verlag (2012). 2. Hadley G, *Linear programming*, 1st Edition, Addison-Wesley (1962). 3. Hillier F S and Lieberman G J, *Introduction to operations research*, 7th Edition, McGraw-Hill (2001). 4. Srinivasan G, *Operations Research: Principles and Applications*, 1st Edition, Prentice (2010).	