Pimpri Chinchwad Education Trust's
Pimpri Chinchwad College of Engineering
Sector No. 26, Pradhikaran,
Nigdi, Pune – 411 044

COURSE OUTLINE

Department: Mechanical Engineering A.Y.:2023-24 Sem-II Date: 01/01/2024

Class: Final Year B.Tech. Course: Operations Research-Professional elective -V (BME 8505C)

Relevance of the course:

One of the most important disciplines in the curriculum for mechanical, manufacturing, and industrial engineering, this subject is heavily weighted in all areas. Operations Research is crucial for achieving academic excellence, acing competitive examinations, or acing that difficult interview.

The field of operations research (OR) involves the application of sophisticated analytical techniques to support better decision-making. To increase our understanding of systems and create practical, effective systems, it takes a comprehensive approach using mathematical modeling, analysis, and optimization. Students can comprehend and resolve issues related to the administration and use of diverse models. Applications for it are found in industry, government, and engineering fields.

Course Outcomes

CO No	CO Statement	No. of Theory sessions	Bloom's Level	Assessment tools
1.	EVALUATE various situations in Decision techniques and APPLY them to solve them in real life for decision making.	9	L5	IE 1 (5m), MTE (15m), ETE (5m)
2.	FORMULATE variety of problems such as transportation, assignment, travelling salesman and SOLVE these problems using linear programming approach.	8	L6	IE 1 (5m), MTE (15m), ETE (5m)
3.	SELECT appropriate model for queuing situations and sequencing situations and FIND the optimal solutions using models for different situations.	6	L2	MTE (20m), ETE (5m)

4.	PLAN optimum project schedule for network models arising from a wide range of applications.	8	L3	IE 2 (5m), ETE (20m)
5.	EVALUATE various situations of Games theory.	7	L5	IE 2 (5m), ETE (20m)
6.	APPLY concepts of simulation.	7	L3	ETE (25m)

Dr. Vrushali Yogesh Bhalerao

Course Faculty and Coordinator