



## **SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)**

(Established under section 3 of the UGC Act 1956)

**Re - accredited by NAAC with 'A' Grade**

**Founder: Prof. Dr. S. B. Mujumdar, M.Sc., Ph.D. (Awarded Padma Bhushan and Padma Shri by President of India)**

(Established under section 3 of the UGC Act 1956, by notification No.F.9-12/2001-U3  
Government of India)

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### **Sub Committee - Specialization for Curriculum Development (QS & A)**

#### **Post Graduate/ Under Graduate**

**Course Name:** Operations Research

**Course Code:** T2219

**(UG/PG):** PG

**Number of Credits:** 1

**Course No.** QS&A P 6

**Level:** 4

**Learning Objective(s):**

1. To enable learners to comprehend the evolution of Operation research and its significances in businesses.
2. To enable learners to formulate and solve decision making models encountered in businesses.

**Pedagogy:**

Lectures, Cases and demonstration using software

**Pre-learning:**

Mathematics (Level 2); Statistics (Level 2)

## Course Outline

S.No.	Topic	Hours
<b>1</b>	Introduction to OR <ul style="list-style-type: none"><li>• Historical Perspective,</li><li>• Definition of OR,</li><li>• Phases in OR intervention and application in business</li></ul>	<b>2</b>
<b>2</b>	Linear Programming: <ul style="list-style-type: none"><li>• Mathematical Formulation and Assumptions,</li><li>• Graphical solution,</li><li>• Simplex Method ,</li><li>• Sensitivity, duality and post- optimality analysis, Special cases, Applications.</li></ul>	<b>8</b>
<b>3</b>	Transport and Assignment Problems: <ul style="list-style-type: none"><li>• Formulation as special case of LP,</li><li>• Initial Feasible Solution,</li><li>• Stepping Stone Methods,</li><li>• Hungarian Methods,</li><li>• Other applications and travelling salesman problem.</li></ul>	<b>5</b>
		<b>15</b>

## Books Recommended

### Books Recommended

- Anderson, D. R., Sweeney, D. J., & Williams, T. A. (2001). *Quantitative methods for business*. South-Western College Pub.
- Taha, H. A. (1995). *Operations research: an introduction*. Prentice Hall
- Sharma, J K. Operations Research (3 Edition) : Theory And Applications

### Suggested Evaluation Methods:

<b>Quiz/ test</b>	<b>10</b>
<b>Assignment</b>	<b>10</b>
<b>External</b>	<b>30</b>
<b>Total</b>	<b>50</b>

### Parallel/Similar courses the existing curriculum:

S.No.	Name of the course	Institute where it was offered

Name of Member	B V Cadambi	B. Tripathy	S . Bhattacharya	KritiPriya Gupta	Vani Rajesh
Designation	Professor	Assistant Professor	Associate Professor	Associate Professor	Assistant Professor
Org. / Inst.	SIBM	SIOM	SCMHRD	SCMS-Noida	SCMS- Pune
Signature					

Name of the Expert: Prof. Asmita Chitnis

Signature:

Date: