Program: **Bachelor's Degree with Honours/Hons. with Research** Class: **UG**	Year: **Fourth**	Semester: **VIII**
Subject: **Mathematics**		
Course Code: **MN-2D**	Course Title: **Operations Research**	

Course Learning Outcomes: This course will enable the students to:

a) solve problems related to linear programming problems.

b) solve problems related to transportation & assignment problems.

c) Solve real life problems using replacement model and sequencing.

Credit: **4 (Theory)**	**Compulsory**
Full Marks: **75**	Time: **3 Hours**

Unit	Content	Hours
I	Convex sets in R2 and their properties, L.P.P., problem formulation, Graphical Method. Simplex method including Big M-method,	15
II	Duality: Definition of the dual problem, Primal-dual relationships, Dual simplex Method.	15
III	Transportation and Assignment problems	15
IV	Deterministic replacement models, sequencing problems on two machines and n jobs.	15

Sessional Internal Assessment (SIA) Full Marks - 25 Marks

A - Internal written Examination - 20 Marks (1 Hr)

B - Over All Performance including Regularity - 05 Marks

Books Recommended:

1. Linear Programming Problem: R.K. Gupta
2. Linear Programming Problem: Lalji Prasad
3. Operations Research: Kanti Swaroop
4. Operations Research: S. D. Sharma

Dr. Bijay Kumar Sinha Dr. Md. Moiz Ashraf Dr. P. C. Banerjee Mr. Mahendra Kumar Rana