



LECTURE SCHEDULE			
Lecture			Description
#	Week	Hrs	
1	1	2	Introduction to Operations Research
2	2	2	Linear Programming: Model Formulation
3	3	2	Applications of Linear Programming
4	4	2	Applications of Linear Programming (continued)
5	5	2	Graphical solution
6	6	2	Special cases in Graphical solution
7	7	2	7 <sup>th</sup> week exam
8	8	2	Simplex Method (Maximization Case)
9	9	2	Simplex Method - Big M method ( Minimization Case)
10	10	2	Transportation Problem (Northwest Corner Method)
11	11	2	Transportation Problem (Least Cost Method)
12	12	2	12 <sup>th</sup> week exam/ Assignment Problem (Hungarian Method)
13	13	2	Assignment Problem (Hungarian Method) (continued)
14	14	2	Project Management (Program Evaluation and Review Technique)
15	15	2	Project Management (Critical Path Method)
16	16	2	Final exam.

TEXT BOOKS	
Code*	Description
	Fredrick S. Hiller and Mark S. Hiller: "Introduction to Management Science" A Modeling and Case Studies Approach with Spreadsheets

REFERENCE BOOKS	
Code*	Description
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TUTORIAL SCHEDULE			
Tutorial			Topic
#	Week	Hrs	
1	1	2	Discussing the Introduction to Operations Research
2	2	2	Linear Programming: Application on Model Formulation
3	3	2	Quantitative applications on Linear Programming
4	4	2	Quantitative applications on Linear Programming (continued)
5	5	2	Graphical solution examples
6	6	2	Applications on the special cases in Graphical solution
7	7	2	Solving the 7 <sup>th</sup> week exam as model answer
8	8	2	Quantitative applications on the simplex Method (Maximization Case)
9	9	2	Quantitative applications on the Simplex Method -Big M method
10	10	2	Quantitative applications on the Transportation Problem(Northwest Corner Method)
11	11	2	Quantitative applications on the Transportation Problem (Least Cost Method)
12	12	2	Quantitative applications on the Assignment Problem (Hungarian Method)
13	13	2	Quantitative applications on the Assignment Problem (Hungarian Method)
14	14	2	Quantitative applications on Project Management (PERT)
15	15	2	Quantitative applications on Project Management (Critical Path Method)



# COURSE FILE SUMMARY

## COURSE INFORMATION

<b>College / Institute / Center</b>	Management and technology	<b>Department</b>	Business Administration
<b>Programme Title</b>	Bachelor of Business Administration	<b>Programme Code</b>	
<b>Course Title</b>	Operations Research	<b>Course Code</b>	E A221
<b># Hours</b>	-----2----- Lecture	-----2----- Lab / Tutorial	-----3----- Credit
<b>Pre Requisites : Statistics (E A213), Management II (E A121)</b>			

## COURSE AIM

To introduce students to the quantitative approach in Quantitative business problems. The purpose of the course is to acquaint the students with quantitative decision-making tools. These tools, collectively discussed under the title of Operations Research have been largely developed since the World War II.

## COURSE OBJECTIVES

The course broadly covers deterministic decision models for planning, decision-making, resource allocation, and control. More specifically these models are discussed in the context of: Linear Programming, Transportation, Transshipment and Assignment, and project management. In particular, the course focuses on thinking structurally about decision problems and applying quantitative techniques in solving them. The course is designed to equip future manager with a conceptual understanding of quantitative decision.

## STAFF REQUIREMENTS

	<b>Qualifications</b>	<b>Special Skills</b>	<b>Number</b>
<b>Lectures</b>	PhD	—	
<b>Tutorials</b>	Bachelor		
<b>Laboratories / Workshops</b>			