



SESSION PLAN

Lecture / Tutorial / Laboratory / Workshop

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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 1	Title: Introduction to Operations Research	Hrs:2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Introduction to Operations Research <ul style="list-style-type: none">- Problem solving process- Mathematical Models
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Prepared by:

Designation

Name Dr. Amr Abd El Aziz

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Date 1/9/2010

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Lecture

Source Material

Fredrick S. Hiller and Mark S. Hiller: "Introduction to Management Science" A Modeling and Case Studies Approach with Spreadsheets

Supplementary Material

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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#:2	Title: Linear Programming: Model Formulation	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Applications to Linear Programming Model Formulation <ul style="list-style-type: none"> - Decision variables - Objective function - Technical constraints - Non-negativity constraint
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 3	Title: Applications of Linear Programming	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1	Application to product mix problem
2	Application to diet problem
3	Application to blending problem
4	Application to media selection problem
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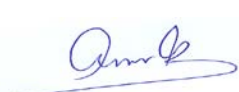
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 4	Title: Applications of Linear Programming (continued)	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Application to assignment problem
2.	Application to transportation problem
3.	Application to portfolio selection
4.	Application to work scheduling
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COURSE PARTICULARS

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#: 5	Title: Graphical solution	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	Application to graphical solution <ul style="list-style-type: none"> - Showing different shapes of area of feasible solutions - Solving problems to find the optimal solution (max or min)
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COURSE PARTICULARS

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#:6	Title: Special cases in Graphical solution	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	Problem on infeasibility case
2.	Problem on unboundedness case
3.	Problem on multiple optimal solutions case
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 7	Title: 7 th week exam	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Solving the answer for the 7 th week exam as model answer
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 8	Title: Simplex Method (Maximization Case)	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Problems on the simplex Method (Maximization Case)
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 9	Title: Simplex Method - Big M method (Minimization Case)	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Problems on the simplex Method - Big M method (Minimization Case)
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#:11	Title: Transportation Problem (Least Cost Method)	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Problems on the transportation Problem (Least Cost Method)
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COURSE PARTICULARS

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#: 12	Title: 12 th week exam & Assignment Problem	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	Solving the 12 th week exam as model answer
2.	Assignment Problem (Hungarian Method) - Minimization problem
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 13	Title: Assignment Problem (Hungarian Method) + Transshipment	Hrs:2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Problems on the Assignment Problem (Hungarian Method) - Maximization problems
2.	Transshipment Problems
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#: 14	Title: Project Management (Program Evaluation and Review Technique)	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Problems on the Project Management (Program Evaluation and Review Technique)
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COURSE PARTICULARS

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#: 15	Title: Project Management (Critical Path Method)	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	Problems on the Project Management (Critical Path Method)
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