



College/Institute/Centre: Management and Technology
 Department of: Accounting and Finance

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
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Prepared by:

Designation

Name Dr. Amr Abd El Aziz

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Date 1/9/2010

Approved by:

Designation

Name Dr. Amr Abd El Aziz

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Date 1/9/2010

MPC3/3-1

Lecture

Source Material

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

Supplementary Material

Educational Resources

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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	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.	Product mix problem
2.	Diet problem
3.	Blending problem
4.	Media selection problem
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<p><u>Lecture</u></p> <p>Source Material</p> <p>Fredrick S. Hiller and Mark S. Hiller: "Introduction to Management Science" A Modeling and Case Studies Approach with Spreadsheets</p>
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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.	Assignment problem
2.	Transportation problem
3.	Portfolio selection
4.	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.	Graphical solution <ul style="list-style-type: none">- Different shapes of area of feasible solutions- Finding the optimal solution (max or min)
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

SESSION PARTICULARS		
#:6	Title: Special cases in Graphical solution	Hrs: 2

LEARNING OUTCOMES / ABILITIES GAINED*	
#	Outcome Description
1.	Infeasibility
2.	Unboundedness
3.	Multiple optimal solutions
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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.	Formulation
2.	Graphical solution
3.	True and False
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COURSE PARTICULARS

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#: 8	Title: Simplex Method (Maximization Case)	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	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.	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.	Transportation Problem (Least Cost Method)
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COURSE PARTICULARS

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#: 13	Title: Assignment Problem (Hungarian Method)	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	Assignment Problem (Hungarian Method) - Maximization problems
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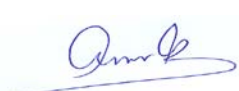
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COURSE PARTICULARS	
#: EA221	Title: Operations Research

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

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

#: EA221	Title: Operations Research
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SESSION PARTICULARS

#: 16	Title: Final exam	Hrs: 2
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LEARNING OUTCOMES / ABILITIES GAINED*

#	Outcome Description
1.	Simplex, Transportation, Assignment, Project Management Problems
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