College of Business Administration

Quantitative Analysis Department

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| **Advanced Topics in Decision Sciences**  **DSC 552** |

Course Facilitator:

**Rashid Alhamali**

[rkahtani@ksu.edu.sa](mailto:rkahtani@ksu.edu.sa)

Office Phone #: (011) 4674102

**Office Hours : Mon. 10:00-1:00 Tue. 9:00-10:00**

**Building 67 Office S 235**

**Course Description**

This course focuses on the advanced topics in decision sciences. Most topics are presented in a quantitative analysis aspects with its application into the managerial environment.

**Course Evaluation**

1. Assignments and attendance (10%)
2. Presentation (10%)
3. Midterm Exam 10th week (30%)
4. Paper Critique Pres. Starting on 11th week (10%)
5. Final exam (40%)

**Text Book**

**Different Text Books and References**

**Course Contents and Plan**

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| **Remarks** | **DATE** | **TOPIC** |
|  |  | **Introduction to Decision Analysis** |
|  |  | **Decision Analysis** |
|  |  | **Inventory Control Models** |
|  |  | **Linear Programming Models: Graphical and Computer Methods** |
|  |  | **Linear Programming Applications** |
|  |  | **Transportation, Assignment, and Network Models** |
|  |  | **Integer Programming, Goal Programming, and Nonlinear Programming** |
|  |  | **Inventory Control Models** |
|  |  | **Waiting Lines and Queuing Theory Models** |
|  |  | **Simulation Modeling** |
|  |  | **Game Theory & Decision Tree** |
|  |  | **Multi-Criteria Decision Making** |
|  |  | **Markov Analysis** |
|  |  | **Statistical Quality Control** |
|  |  | **Analytic Hierarchy Process** |
|  |  | **Dynamic Programming** |
|  |  | **Regression Models** |
|  |  | **Forecasting** |
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