Form (H)
Short course description

Course title: **Game and Decision Theory**	Course number and code: **OPER 385**
Previous course requirement: **OPER 213**	Language of the course: **Arabic**
Course level: **level five**	Effective hours: **3 (2+2+0)**

Course description

Introduction to Game theory: Examples and terminology of game theory. Two person zero sum game: Game tree, Pure strategies, mixed strategies, solution to two person zero game by linear programming. Non-cooperative two-person nonzero sum game: Equilibrium points, Swastika method. Cooperative two-person nonzero sum game: Max-min bargaining solution, threat bargaining solution, Shapley Nash method. N-Person game: Characteristic function, the core, stable sets, Shapley function values. Elements of Decision theory.

Course objectives

This course is concerned, on one hand, with the analysis and formulation of real world problems arising in almost every facet of human activity related to decisions and games situations where one or more parties are involved and the other. On the other hand, study the methods to solve these problems.

Learning outcomes (understanding, knowledge, and intellectual and scientific skills)
After studying this course, the student is expected to be able to:

1. *Ability to build models related to decision-making and conflict scenarios.*
2. *Ability to use appropriate mathematical techniques to solve these models.*

Textbook adopted and supporting references

سنة النشر	اسم الناشر	اسم المؤلف	اسم الكتاب
2006	**King Saud university University Press**	**Zaid T. Balkhi**	***Essentials of Game theory***
2011	**Dove Books**	**Thomas, L. C.**	***Games, Theory and applications***