Form (H)
Short course description

Course title: **Introduction to Operations Research**	Course number and code: **OPER 100**
Previous course requirement: **STAT 101 - MATH 101**	Language of the course: **Arabic**
Course level: **three**	Effective hours: **4 (3+2+0)**

Course description

Aims and scope of Operations research and its applications. Formulation of real world problems as linear programs. Graphical solution of linear programs. Graphical Sensitivity Analysis. Study of special LP Models: Transportation and Assignment Problems. Decision Theory. Introduction to Optimization in one variable. Introduction to Queuing Theory.

Course objectives

Operations Research is the study of scientific approaches to decision-making. Through mathematical modeling, it seeks to design, improve and operate complex systems in the best possible way. This course aims to study some basic decision-making models and applying appropriate solution techniques to solve them.

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

1. *Aims and scope of Operations research.*
2. *Ability to formulate some real world problems as linear programs and the capacity to solve them and perform sensitivity analysis.*
3. *Study some special linear programming models (Transportation and Assignment problems).*
4. *Acquire some knowledge about decision theory, Nonlinear programming, and Queuing theory.*

Textbook adopted and supporting references

سنة النشر	اسم الناشر	اسم المؤلف	اسم الكتاب
٢٠١٦	**Macmillan Publishing Company**	**Hamdy Taha**	**Operations Research, An Introduction**
2007	**مطابع جامعة الملك سعود**	**زيد تميم البلخي**	**مقدمة في بحوث العمليات**