

Spring 2015

## IE 311: Operations Research I

### Lab and Tutorial Syllabus

**Instructor:** Duaa Bogari

**Office Hours:** Sun 10-1

Mon 11-1

Tues 10-12, 1-2

**Office:** Building 7, room 70-C

**E-mail:** [dbogari@kau.edu.sa](mailto:dbogari@kau.edu.sa)

**Website:** <http://dbogari.kau.edu.sa>

**Class Days:** Thursday

**Class Time:** 1-2:50 pm

**Classroom:** Building 64G, 120L

**Textbook:**

Quantitative Analysis for Management, Barry Render, Ralph M. Stair (Jr) and Michael Henna, Prentice Hall International Inc., 11th Edition (2012).

**Software:** Excel Solver, QM, and TORA

**Grading:** Assignments 5%  
Lab 5%

**Topics to be covered:**

- ❖ Modeling with Graphical solution of Linear Programming problems
- ❖ Simplex Method
- ❖ Sensitivity Analysis and Duality
- ❖ Transportation and Assignment problems
- ❖ Network Models
- ❖ Integer Linear Programming
- ❖ Goal Programming models
- ❖ Introduction to Nonlinear Programming