



Jordan University of Science and Technology
Faculty of Engineering
Industrial Engineering Department

IE342 Operations Research (1)

Summer Semester 2019-2020

Course Catalog

3 Credit Hours. The course covers basic principles of building and solving mathematical models of linear systems using analytical and software tools. Topics include graphical and analytical optimization of linear systems and transportation and network models.

Text Book

Title	Operations Research: An Introduction.
Author(s)	Hamdy A. Taha
Edition	9th Edition
Short Name	Ref #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Introduction to mathematical programming	Gerald J. Lieberman and S. Hillier	8th Edition	

Instructor

Name	Dr. NADER AL THEEB
Office Location	C5-L2
Office Hours	
Email	naaltheeb@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00
 Room: منصة الكترونية

Prerequisites

Line Number	Course Name	Prerequisite Type
293110	IE311 Numerical Methods	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Introduction to Linear Programming (LP)	From Ref #1
Week 2	Solving LP Graphically	From Ref #1
Weeks 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	The Simplex Method, Special cases of Simplex method, Simplex computation, and Sensitivity and Post-optimal Analysis	Chapter 3 and 4 From Ref #1
Weeks 13, 14	Transportation Models & its Variants	Chapter 5 From Ref #1
Weeks 15, 16	Network Models	Chapter 6 From Ref #1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understand and appreciate the role of Operations Research in making decisions in services and manufacturing.	30%	
Develop analytical and practical understanding of basic concepts and methods in Operations Research.	20%	
Practice examples of real-world situations where Operations Research methods are used.	50%	

Relationship to Program Student Outcomes (Out of 100%)

SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7

Evaluation

Assessment Tool	Weight
First Exam	30%
Second Exam	20%

Final Exam	50%
------------	-----

Policy	
Attendance	University policy for attendance will be applied.
Homework	Homeworks will be requested from students, but they will not be graded.

Date Printed: 2020-09-24