TOROS ÜNİVERSİTESİ

Faculty Of Engıneerıng
Industrıal Engıneerıng (Englısh)

Course Information

OPERATIONS RESEARCH I					
Code	**Semester**	**Theoretical**	**Practice**	**National Credit**	**ECTS Credit**
		Hour / Week			
INE200	Spring	3	2	4	7

Prerequisites and co-requisites	NONE
Language of instruction	English
Type	Required
Level of Course	Bachelor's
Lecturer	Prof. Dr. Ali KOKANGÜL
Mode of Delivery	Face to Face
Suggested Subject	NONE
Professional practise (internship)	None
Objectives of the Course	An exposure to modeling for solving industrial engineering, and managerial problems. Further introducing linear programming and simplex method together with sensitivity analysis for providing solutions to real life problems.
Contents of the Course	Modeling process, formulation. Linear programming, simplex method. Duality and sensitivity.

Learning Outcomes of Course

#	Learning Outcomes
1	State the mathematical model of the problem
2	Solve the mathematical problem with proper method
3	Solve the mathematical problems with computer
4	

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Introduction	Lecturing
2	Linear Programming- Graphical solution	Lecturing
3	Modeling and Linear programming	Lecturing
4	Modeling and Linear programming	Lecturing
5	Modeling and Linear programming	Lecturing
6	Simplex method	Lecturing
7	Midterm	Exam
8	Simplex method	Lecturing
9	Simplex method	Lecturing
10	Simplex method	Lecturing
11	Duality	Lecturing
12	Duality	Lecturing

13	Duality	Lecturing
14	Sensitivity Analysis	Lecturing
15	Sensitivity Analysis	Lecturing
16	Final Exam	

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Operations Research: Applications and Algorithms, W.L. Winston		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	State the mathematical model of the problem	1	
2	Solve the mathematical problem with proper method	2	
3	Solve the mathematical problems with computer	3	
4		4	

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	5	70
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	13	13
8	Midterm Exam	1	5	5
9	Quiz	0	0	0
10	Homework	1	5	5
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	26	26
16	Final Exam	1	3	3
				150