Course Syllabus

Code - Course Title	**YBS401U - Operational Research**
Course Type	VII. SEMESTER
Laboratory + Practice	0+0
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	PROF. DR. MURAT AKYILDIZ

Mode of Delivery	Distance Education
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended optional programme component for this course.
Work Placement	Not Applicable

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Yöneylem Araştırmasına Giriş	
Week - 2		Yöneylem Araştırmasına Giriş	
Week - 3		Doğrusal Programlama	
Week - 4		Doğrusal Programlama	
Week - 5		Doğrusal Programlama Modellerinin Çözümü: Grafik Çözüm Tekniği	
Week - 6		Doğrusal Programlama Modellerinin Çözümü: Grafik Çözüm Tekniği	
Week - 7		Simplex algorithm for linear programing	
Week - 8		Simplex algorithm for linear programing	
Week - 9		Transportation Problems	
Week - 10		Transportation Problems	
Week - 11		Assignment Problems	
Week - 12		Network Problems: Shortest Route and Minimum Spanning Tree	
Week - 13		Integer Programming	
Week - 14		Multi-objective Optimization and Goal-Programming	

Learning Outcomes

#	Learning Outcome
1	To be able to tell the history of operations research.
2	To be able to construct a mathematical model of the given problem
3	To be able to apply the graphical solution of the given problem
4	To be able to apply the simplex solution of the given problem
5	To be able to solve a given assignment problem with the Hungarian algorithm
6	To be able to solve a given network problem
7	To be able to solve a given integer problem
8	To be able to solve a given goal programming problem

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.

Assessment Method and Passing Requirements	Quamtity	Percentage (%)
1.Midterm Exam	1	30
Final Exam	1	70
	Sum (%)	**100**