Course Syllabus

Code - Course Title	**İKT216U - Mathematical Economics**
Course Type	IV. SEMESTER
Laboratory + Practice	0+0
ECTS	**7.0**
Language of Instruction	İngilizce
Course Type	Required Courses
Course Instructor(s)	Prof. Dr. Selim YILDIRIM

Mode of Delivery	Distant Education
Prerequisites	MAT109U Mathematics I (ING)MAT110U Mathematics II (ING)
Courses Recomended	No recommended optional programme component at the moment
Recommended Resources	Mathematical Economics, Open Educaiton Publishing
Work Placement	No work placement

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Sets, Functions and Properties of Functions	
Week - 2		Limits and Differentiation	
Week - 3		Matrices and Solving the systems of equations with matrices	
Week - 4		Input Output Analysis	
Week - 5		Sample Problems and Their Solutions for Chapter 1 and 2	
Week - 6		Sample Problems and their Solutions for Chapter 3 and 4	
Week - 7		Midterm Exam	
Week - 8		Unonstrained and constrained Optimization	
Week - 9		Integrals	
Week - 10		Difference Equations	
Week - 11		Differential Equations	
Week - 12		Sample Problems and Their Solutions for Chapter 5 and 6	
Week - 13		Sample Problems and Their Solutions for Chapter 7 and 8	
Week - 14		Final Exam	

Learning Outcomes

#	Learning Outcome
1	Explaining the mathematical and economic meaning of the derivative and using the derivative in economic analysis.
2	To be able to define linear and quadratic functions and explain their usage areas in economics.
3	By explaining the basic properties of exponential and logarithmic functions, to be able to define in which fields and for what purpose these types of functions are used in economics undergraduate education.
4	Explaining the solution methods of linear equation systems and using this knowledge in economic applications.
5	To be able to solve systems of equations with inverse matrix, Gauss method and Cramer's rule by recognizing the notations used with matrix algebra terminology.
6	To define the concept of multivariate function and to use functions with two or more variables in economic applications.
7	To define the concept of optimization in economic functions and to find the maximum and minimum points of single and multivariate functions.
8	To be able to solve constrained optimization problems in two-variable functions by defining the concept of constrained optimization in economic functions.

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 (%)

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