Course Syllabus

Code - Course Title	**MAT405 - Functional Analysis I**
Course Type	VII. SEMESTER
Laboratory + Practice	3+0
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	PROF. DR. YALÇIN KÜÇÜK

Mode of Delivery	The mode of delivery of this course is Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	Abstract Mathematics 1,2, Analysis 3,4, Topology 1,2
Recommended Resources	Bayraktar, M. (2006) Fonksiyonel Analiz, Gazi Yayınevi Kreyzing, E (1989) Introductory Functional Analysis with Applications. J.WILEY & SONS Bryan P. and Martin A Youngson (2000) Linear Functional Analysis,Springer Yüksel Soykan, Functional Analysis
Work Placement	N/A

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Metric spaces, sequences and Cauchy sequences	
Week - 2		Completeness	
Week - 3		Seperability, Homeomorphisms	
Week - 4		Isometries	
Week - 5		Connected sets	
Week - 6		Normed spaces, definition of the norm	
Week - 7		Equivalent norms and metrics which are obtained by norms	
Week - 8		Examples of normed spaces	
Week - 9		Banach spaces	
Week - 10		The seriesin normed spaces	
Week - 11		Bounded linear functions	
Week - 12		Linear Homeomorphisms	
Week - 13		Linear isometries	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 14		Finite-dimensional normed spaces	

Learning Outcomes

#	Learning Outcome
1	identify the series and their convergence in normed spaces

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	20
Final Exam	1	50
2.Midterm Exam	1	30
	Sum (%)	**100**