Course Syllabus

Code - Course Title	**MAT841 - Mathematics**
Course Type	I. SEMESTER
Laboratory + Practice	3+0
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	ÖĞR. GÖR. HÜSEYİN REHA AKGÜN

Mode of Delivery	face to face
Place of Delivery	On Campus
Used Educational Platforms	Face-to-face
Prerequisites	Basic mathematical knowledge
Courses Recomended	Algebra
Recommended Resources	Generally accepted sources regarding Basic Mathematical Knowledge and Algebra
Work Placement	NA
Aims of the Course	To provide the mathematical and algorithmic logic underlying the processes of structuring, resizing, filtering, and optimizing data encountered daily when working with Python (Pandas/NumPy), SQL, and Machine Learning libraries.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Powers and Roots, Absolute Value	Lecture
Week - 2		Algebraic Expressions (Identities, Equations, Inequalities)	Lecture
Week - 3		Introduction to Functions and the Coordinate Plane	Lecture
Week - 4		Linear Modeling and Parabolas	Lecture
Week - 5		Optimization (Linear Programming)	Lecture
Week - 6		Logarithmic Transformations and Systems	Lecture
Week - 7		Midterm Exam	
Week - 8		The Concept of Matrices and Data Dimensions, Tensors	Lecture
Week - 9		Basic Operations in Matrices	Lecture
Week - 10		Scalar Product and Inner Product	Lecture
Week - 11		Vector Distance and Algorithms	Lecture

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 12		Matrix Multiplication and Inverse Matrix	Lecture
Week - 13		Visualization of Matrices (Heat Maps)	Lecture
Week - 14		Final Exam	

Learning Outcomes

#	Learning Outcome
1	Advanced math skills
2	Problem solving abilities
3	Application of mathematical concepts
4	Application of mathematical concepts
5	Graphical representation of matrix data
6	"Performs matrix data structure operations with fundamental and advanced mathematical skills."

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.