

COURSE LIST

Institute of Natural and Applied Sciences

Field : Mathematics

Course Title	Code	ECTS Credit	COMU Credit	Lecturer
Mathematical Statistics 1	ULP-21-MT001	7.5	3	Prof. Dr. Bilgehan Güven
Mathematical Statistics 2	ULP-21-MT002	7.5	3	Prof. Dr. Bilgehan Güven
Regression Analysis	ULP-21-MT003	7.5	3	Prof. Dr. Bilgehan Güven
Ideal Topological Spaces	ULP-21-MT005	7.5	3	Prof. Dr. Erdal Ekici
Analysis of Variance	ULP-21-MT004	7.5	3	Prof. Dr. Bilgehan GÜVEN
Selected Topics in Topology	ULP-21-MT006	7,5	3	Prof. Dr. Erdal Ekici
Topological Spaces I	ULP-21-MT007	7,5	3	Prof. Dr. Erdal Ekici
Topological Spaces II	ULP-21-MT008	7,5	3	Prof. Dr. Erdal Ekici
Matrix Theory I	ULP-21-MT009	7,5	3	Assist. Prof. Dr. Serdar Enginoğlu
Matrix Theory II	ULP-21-MT010	7,5	3	Assist. Prof. Dr. Serdar Enginoğlu

Course Code	ULP-21-MT001
Name of the Course in English	Mathematical Statistics 1
Name of the Course in Turkish	Matematiksel İstatistik 1
Language of the Course	English
Level of the Course	Master
Lecturer	Prof. Dr. Bilgehan Güven
ECTS Credit	7.5
COMU Credit	3
Description	Probability spaces, Probability measure, Conditional probability, independent

	events, Random variables and their distributions, expected values and moments, Characteristic functions, Random vectors, single and multi-dimensional transformations, Some special continuous distributions.
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Course Code	ULP-21-MT002
Name of the Course in English	Mathematical Statistics 2
Name of the Course in Turkish	Matematiksel İstatistik 2
Language of the Course	English
Level of the Course	Master
Lecturer	Prof. Dr. Bilgehan Güven
ECTS Credit	7.5
COMU Credit	3
Description	Sample and population concepts, Point estimations, Interval estimations, Hypothesis testing.

Course Code	ULP-21-MT003
Name of the Course in English	Regression Analysis
Name of the Course in Turkish	Regresyon Analizi
Language of the Course	English
Level of the Course	Master
Lecturer	Prof. Dr. Bilgehan Güven
ECTS Credit	7.5
COMU Credit	3
Description	Simple linear regression analysis, Least Squares Estimation Method (LSE), Hypothesis testing and confidence intervals for parameters included in model, Matrix forms, Multiple linear regression analysis, Testing general linear hypotheses.

Course Code	ULP-21-MT004
Name of the Course in English	Analysis of Variance
Name of the Course in Turkish	Varyans Analizi
Language of the Course	English
Level of the Course	Master
Lecturer	Prof. Dr. Bilgehan Güven
ECTS Credit	7.5
COMU Credit	3
Description	Least squares estimating method, One-Way ANOVA, Two-Way ANOVA, Nested classification, Confidence intervals and hypothesis testing, Overparametrization.

Course Code	ULP-21-MT005
Name of the Course in English	Ideal Topological Spaces
Name of the Course in Turkish	İdeal Topolojik Uzaylar
Language of the Course	English
Level of the Course	Doctorate
Lecturer	Prof. Dr. Erdal Ekici
ECTS Credit	7.5
COMU Credit	3
Description	The notion of ideal, maximal ideal, minimal ideal, local function, *-topology and generalized open sets, various examples of ideals and properties of them, separation axioms in ideal topological spaces, *-topological properties, compact ideal topological spaces, some sets in ideal topological spaces.

Course Code	ULP-21-MT006
Name of the Course in English	Selected Topics in Topology
Name of the Course in Turkish	Topolojide Seçme Konular
Language of the Course	English
Level of the Course	Doctorate
Lecturer	Prof. Dr. Erdal Ekici
ECTS Credit	7.5
COMU Credit	3
Description	Compactifications, totally disconnected spaces, locally connected spaces, path-connected spaces, uniform spaces, paracompact spaces, metrizable spaces.

Course Code	ULP-21-MT007
Name of the Course in English	Topological Spaces I
Name of the Course in Turkish	Topolojik Uzaylar I
Language of the Course	English
Level of the Course	Master
Lecturer	Prof. Dr. Erdal Ekici
ECTS Credit	7.5
COMU Credit	3
Description	Metric spaces, topological spaces, base and subbase, neighbourhoods, homeomorphism, subspaces, product spaces, various separation axioms.

Course Code	ULP-21-MT008
Name of the Course in English	Topological Spaces II
Name of the Course in Turkish	Topolojik Uzaylar II
Language of the Course	English
Level of the Course	Master
Lecturer	Prof. Dr. Erdal Ekici
ECTS Credit	7.5
COMU Credit	3
Description	Nets, convergent nets, filters, ultra filters, convergent filters, base of filters, connections between nets and filters, I. countable spaces, II. countable spaces, separable spaces, various compact spaces, connected spaces.

Course Code	ULP-21-MT009
Name of the Course in English	Matrix Theory I
Name of the Course in Turkish	Matris Teorisi I
Language of the Course	English
Level of the Course	Master / Doctorate
Lecturer	Assist. Prof. Dr. Serdar Enginođlu
ECTS Credit	7.5
COMU Credit	3
Description	<ol style="list-style-type: none"> 1. Vector Spaces 2. Matrices, 3. Simultaneous Linear Wquations, 4. The Inverse 5. Determinants 6. Eigenvalues and Eigenvectors 7. Eigenvalues and Eigenvectors 8. Exam 9. Real Inner Products, 10. Real Inner Products,

	11. Matrix Calculus, 12. Matrix Calculus, 13. Matrix Calculus, 14. Final Exam
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Course Code	ULP-21-MT010
Name of the Course in English	Matrix Theory II
Name of the Course in Turkish	Matris Teorisi II
Language of the Course	English
Level of the Course	Master / Doctorate
Lecturer	Assist. Prof. Dr. Serdar Enginođlu
ECTS Credit	7.5
COMU Credit	3
Description	1. Matrices and Determinants 2. Eigenvalues and Eigenvectors, 3. Matrix Calculus, 4. Linear Differential Equations 5. Linear Differential Equations 6. Jordan Canonical Forms 7. Jordan Canonical Forms 8. Jordan Canonical Forms 9. Exam 10. Special Matrices 11. Special Matrices 12. Elements of Matrix Analysis 13. Elements of Matrix Analysis 14. Final Exam