COURSE LIST Faculty of Arts & Sciences Department of Mathematics

Please note that Erasmus students are allowed to take courses from lists of all faculties/schools according to their needs or interests.

Courses offered in Turkish are listed at the website of the faculty http://fef.comu.edu.tr/ or you can contact Departmental Coordinator to get the necessary information

Courses offered in English

Course Title	Code	ECTS Credit	COMU Credit	Lecturer
General Topology I	ULP-02-241	5	3	Prof. Dr. Erdal Ekici
General Topology II	ULP-02-242	5	3	Prof. Dr. Erdal Ekici
Functional Analysis	ULP-02-243	10	4	Prof. Dr. Yakup Haci
Functional Analysis	ULP-02-244	10	4	Prof. Dr. Yakup Haci
Fuzzy Logic and Its Applications	ULP-02-245	5	3	Assist. Prof. Serdar Enginoglu
Fuzzy Numbers and Fuzzy Sets	ULP-02-246	5	3	Assist. Prof. Serdar Enginoglu
Computer Programming I	ULP-02-247	5	3	Assist. Prof. Dr. Can Aktas
Computer Programming II	ULP-02-248	5	3	Assist. Prof. Dr. Can Aktas

Course Code	ULP-02-241

Name of the course in English	General Topology I
Name of the course in Turkish	Genel Topoloji I
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Prof. Dr. Erdal Ekici
ECTS Credits	5
COMU Credits	3
Description	Topological spaces, basis, subbasis, interior, closure, frontier and closure point of a set in a topological space, neighborhood, continuous fonctions, open and closed mappings, homeomorphisms, subspaces.

Course Code	ULP-02-242
Name of the course in English	General Topology II
Name of the course in Turkish	Genel Topoloji II
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Prof. Dr. Erdal Ekici
ECTS Credits	5
COMU Credits	3
Description	First countable spaces, second countable spaces, Lindelof spaces, separable spaces,

	product topological spaces, quotient spaces, separation axioms, sequences and convergence in topological spaces, compact spaces, connected spaces.

Course Code	ULP-02-243
Name of the course in English	Functional Analysis
Name of the course in Turkish	Fonksiyonel Analiz I
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Prof. Dr. Yakup Haci
ECTS Credits	10
COMU Credits	4
Description	Metrik Space Metrik space Convergence and Continuity Couchy sequences and completeness Complete Spaces, Completed of metrik space Linear Spaces Normed Spaces Banach Spaces Midterm Banach Spaces Banach Spaces

	Inner product and Hilbert spaces Inner product and Hilbert spaces Basic terms of the theory of operators Basic terms of the theory of operators Final Exam

Course Code	ULP-02-244
Name of the course in English	Functional Analysis II
Name of the course in Turkish	Fonksiyonel Analiz II
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Prof. Dr. Yakup Haci
ECTS Credits	10
COMU Credits	4
Description	Dual Spaces and adjoint operators Dual Spaces and adjoint operators Hahn-Banach teorem and its results Hahn-Banach teorem and its results Compactness in normed spaces, compact operators Compactness in normed spaces, compact operators Orthogonality in inner product space, Orthogonal

	Repeated approximations method Midterm Repeated approximations method Existence and uniqueness theorem for integral Existence and uniqueness theorem for integral Fredholm and Voltera integral equations Fredholm and Voltera integral equations Final Final

Course Code	ULP-02-245
Name of the course in English	Fuzzy Logic and Its Applications
Name of the course in Turkish	Bulanik Mantik ve Uygulamalari
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Assist. Prof. Serdar Enginoglu
ECTS Credits	5
COMU Credits	3
Description	Classical Sets and Fuzzy Sets Classical Relations and fuzzy Relations Classical Logic Classical Logic Many - Valued Logic

	Fuzzy Logic Fuzzy Logic Fuzzy Logic and Approximate Reasoning Exam Decision Making and Its Applications Fuzzy Decision Making and Its Applications Fuzzy Logic Control and Its Applications Fuzzy Logic Control and Its Applications Fuzzy Logic Control and Its Applications Fuzzy Logic Control and Its Applications Final Exam

Course Code	ULP-02-246
Name of the course in English	Fuzzy Numbers and Fuzzy Sets
Name of the course in Turkish	Bulanik Sayilar ve Bulanik Kumeler
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Assist. Prof. Serdar Enginoglu
ECTS Credits	5
COMU Credits	3
Description	Interval Arithmetics Multi Level Interval Numbers

	Fuzzy Numbers Fuzzy Numbers Arithmetic with Fuzzy Numbers Arithmetic with Fuzzy Numbers Classical Sets Classical Sets Exam Fuzzy Sets Fuzzy Sets Fuzzy Sets Fuzzy Relations Fuzzy Relations Fuzzy Relations and Approximate Reasoning Exam

Course Code	ULP-02-247
Name of the course in English	Computer Programming I
Name of the course in Turkish	Bilgisayar Programlama I
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Assist. Prof. Dr. Can Aktas
ECTS Credits	5
COMU Credits	3

Description	Algorithms Algorithms and Flow Charts Introduction to Fortran 90 programming Language Input-output commands Control commands (If, Case) Do loop, while do commands Do loop, while do commands Exercises Midterm Exam Functions Recursive Functions Subrotuines Subrotuines Final Exam

Course Code	ULP-02-248
Name of the course in English	Computer Programming II
Name of the course in Turkish	Bilgisayar Programlama II
Language of the course	English
Level of Course	(x) Bachelor's / Undergraduate ( ) Master ( ) Doctorate
Lecturer	Assist. Prof. Dr. Can Aktas
ECTS Credits	5

COMU Credits	3
Description	General Information about MAPLE Numbers and Polynomials Plot Graph Plot Graph Solutions of equations and systems of equations Inequalities, Sets and Sequences Limits and Continuity Differentiation and Integration Midterm Exam Programming Differential Equations Vectors Matrices Final Exam