Code and Name of Course	MTK 242-01-02 Linear Algebra II
Type of Course	Compulsory
Credit of Course	4 2 5
ECTS Credit	8
Course Lectures	Assoc.Prof. Feride Kuzucuoğlu, Assoc.Prof. Derya Keskin Tütüncü, Assoc.Prof. A. Çiğdem Özcan
Pre-requisites	MTK 241 (Linear Algebra I)
Course Length	1 Semester , 4 hours - 2 hours tutorial per week. Total 6 hours per week
Course Content	• Cayley-Hamilton's Theorem, • minimal polynomial, • eigenvectors, • eigenvalues, • diagonalization, • canonical forms, • inner product spaces, • Gramm-Schmidt Orthogonalization Process, • adjoint, self-adjoint, positive, Hermitian Operators.
Course Objectives:	At the end of this course a student: I. computes the division of two polynomials and demonstrates whether a polynomial is prime or not, II. lists the prime factorizations of a polynomial, III. defines the characteristic and the minimal polynomials and predicts any applications of them, IV. defines eigenvalues and eigenvectors, and explains whether a matrices or a linear transformations is diagonalizable or not, V. lists the canonical forms of matrices VI. lists the properties of the inner product spaces, VII. constructs an orthogonal basis with Gramm-Schmidt Orthogonalization Process, VIII. defines adjoint, self-adjoint, positive and Hermitian operators, modifies properties known for matrices to these operators.
References	• C. Koç, Topics in Linear Algebra, METU, 1996. • K. Hoffman, R. Kunze, Linear Algebra, Prentice-Hall, 1971. • Other related lecture notes.
Main Teaching Methods	Lecturing, Discussing, Recitation
Assessment Methods	Midterms(% 50), Final (%50).
Language of Course	English