Program	Level	First cycle
	Name of the program	Pure Mathematics, Applied Mathematics, Mathematics Education, Mathematics and Informatics Education

COURSE				
Course title	**Linear Algebra II**			
Course code	Semester	Course status	ECTS	Contact hours (L+AE+LE)
PMAT 190	II	Mandatory course	6	3+2+0
Lecturer				
Course Goals	The course aims to expand the knowledge of the course Linear algebra I. Basic knowledge about vector spaces and linear mappings is enriched with eigenvalues, cyclic spaces, Jordan's Normal form, bilinear form and Euclidean spaces.			
Learning Outcomes	At the end of the course, students should have a deeper understanding of linear algebra concepts and the importance of linear algebra in mathematics. They should be able to apply advanced linear algebra techniques to solve problems in geometry, functional analysis, and other areas of mathematics that involve linear algebra.			

COURSE CONTENT

- Eigenvalues and Eigenvectors Diagonalizibility
-Invariant subspaces and the Cayley-Hamilton Theorem
- Inner products and Norms, Orthogonalization
- The Adjoint of a Linear Operator
- Normal and Self-Adjoint Operators, Unitary and Orthogonal Operators
- Quadratic and Bilinear Forms
- Jordan Canonical Form
- The Minimal Polynomial

LITERATURE

[1] Stephen H. Freidberg, Arnold J. Insel, Lawrence E. Spence, Linear algebra, Pearson; 4th edition (2002)
[2] Gilbert Strang, Linear algebra and Applications, Wellesley Cambridge Press, 2009.
[3] Kennet Hoffman, Ray Kunze, Linear Algebra, Prentice-Hall, Inc., 1971.

STUDENT WORKLOAD (hours in a semester)

Lectures	45	Exercises	30	Individual work	65	T o t a l	125

GRADING			REMARKS
Criterion	Maximum points	Minimum points	
Midterm exams	50	25	
Final exam	50	25	
T o t a l	100	55	