UNIVERSITÀ DI PAVIA

Anno Accademico 2014/2015

LINEAR ALGEBRA	
Enrollment year	2014/2015
Academic year	2014/2015
Regulations	DM270
Academic discipline	MAT/03 (GEOMETRY)
Department	DEPARTMENT OF MATHEMATICS "FELICE CASORATI"
Course	MATHEMATICS
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	1st semester (01/10/2014 - 15/01/2015)
ECTS	9
Lesson hours	84 lesson hours
Language	ITALIAN
Activity type	ORAL TEST
Teacher	PIROLA GIAN PIETRO (titolare) - 6 ECTS PERNAZZA LUDOVICO - 3 ECTS
Prerequisites	Elementary algebra and some basic calculus.
Learning outcomes	We would like to give the elementary notions of linear algebra to introduce the student to the vector and matrix language. Great relevance will be given to applications to linear system and to analytic geometry.
Course contents	Linear algebra Extended summary Geometric vectors. Vector Spaces generators and linear dependence, basis. Linear systems, matrix rank. Determinant, linear problems coordinates and change of coordinates. Operators, eigenvalues and eigenvectors.

	Diagonalization. Bilinear forms and scalar products. Lines and plane in the space, example of curves and of surfaces (conics, cone cylinders).
Teaching methods	Lessons
Reccomended or required readings	E. Sernesi: "Geometria 1", Bollati Boringhieri. S. Lang: "Algebra Lineare", Bollati Boringhieri. Dispense fornite dal docente.
Assessment methods	Written and oral exam
Further information	Written and oral exam
Sustainable development goals - Agenda 2030	[$lbl_legenda_sviluppo_sostenibile](#)