	March 2	Introduction to linear systems
☐	March 16	Matrices. Gauss reduction to echelon form
☐	March 19	Free variables. Existence and enumeration of solutions of linear systems.
☐	March 20	Numerical vectors and linear systems.
☐	March 23	Linear combinations of vectors
☐	March 26	Linear independence
☐	March 27	Extraction of subsets of linearly independent vectors
☐	March 30	Matrix transformations
☐	April 2	Linear transformations
☐	April 3	Injective, surjective, bijective linear transformations. Linear subspaces
☐	April 6	Basis and dimensions of linear subspaces
☐	April 9	Rank of a matrix. Dimension theorem
☐	April 10	Multiplication of matrices
☐	April 16	Product of matrices and composition of transformations. Product of matrices and rank. Invertible transformations and matrices.
☐	April 17	Computing the inverse matrix. Applications to linear systems
☐	April 20	Change of basis
☐	April 23	Abstract linear spaces
☐	April 24	Abstract linear subspaces
☐	April 27	Sum and intersection of linear subspaces
☐	April 30	Direct sum. Grassmann formula
☐	May 4	Determinants
☐	May 7	Binet theorem. Formula for inverse matrix. Cramer's rule.
☐	May 8	Determinants, area and volume. Determinants and rank
☐	May 11	Linear maps. Kernel and image. Matrix of a linear map
☐	May 14	Affine subspaces. Cartesian and parametric equations
☐	May 15	Relative positions of lines and planes
☐	May 18	Plane through 3 points. Dot products. Angles, distances, perpendicularity.
☐	May 21	Distance between point and line/plane . Cross product. Orthogonal subspace.
☐	May 22	Orthonormal basis. Gram-Schmidt algorithm. Orthogonal projection
☐	May 25	Formula for the orthogonal projection. Abstract inner products
☐	May 28	Eigenvalues and eigenvectors
☐	May 29	Diagonalization of matrices
☐	June 4	Spectral theorem. Version for self-adjoint transformations
☐	June 5	Orthogonal matrices. Rotations, reflections. Spectral decomposition
☐	June 8	Isometries. Quadratic forms
☐	June 11	Conic sections. Ellipse, hyperbola, parabola.
☐	June 12	Reduction of conics to canonical form by rotation and translation