AGU
Course Record Catalogue

Code	**IE501**
Name	**Mathematics for Optimization**
Hour per week	3 (3 + 0)
Credit	3
ECTS	10
Level/Year	Graduate
Semester	Fall or Spring
Type	Compulsory
Prerequisites	
Content	The course is designed to teach necessary mathematics background for optimization: methods of proof, sets, functions, series, metric spaces. Introduction to complex algebra. Systems of linear equations, Gaussian elimination. Vector spaces and their extension to complex case, linear dependence/independence, bases. Matrix algebra, determinant, inverse, factorization. Eigenvalue problem, diagonalization, quadratic forms.