MATHEMATICS II

Degree(s)	: Economics; Management; Finance
Type	: Compulsory course unit
Curricular year/semester	: 1st year / 2nd Semester
ECTS / hours per week	: 6 ECTS / 5.0 Hours
Workload per week	: 2 Theoretical x 1.5 Hours + 1 Practical x 2 Hours
Teacher responsible	: Professor Manuel Cidraes Castro Guerra

OBJECTIVES

Pursue the objectives of Mathematics I, i.e.:

- To provide a grounding in mathematical tools that are needed for economics.
- To develop rigor and ability to manipulate mathematical methods.
- To increase capacity for solving quantitative problems having applications in economics in view.

PROGRAM

- Eigenvalues and eigenvectors. Quadratic forms (Eigenvalues and eigenvectors. Diagonalization; Quadratic forms
- Functions of several variables (Definitions. Domain. Topological notions in Rⁿ Limits and continuity; Patial derivatives and diferentiability; Implicit function; Multivariable Optimization. Constrained optimization)
- Differential equations
- Difference equations

BIBLIOGRAPHY

Recommended Bibliography:

- Sydsaeter, K., e P. Hammond, Mathematics for Economic Analysis, Prentice Hall, 1995

Optional Bibliography:

- Agudo, F. Dias, Análise Real, Vol I, Escolar Editora, 1989
- L. Sanchez, Análise em Rn, Ass. de estudantes FCUL. , 0000