becge1231 2024	Mathematics for economics and management III

4.00 credits	30.0 h + 15.0 h	Q2

Teacher(s)	Lavendhomme Thierry ;
Language :	French
Place of the course	Bruxelles Saint-Louis
Prerequisites	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Learning outcomes	**At the end of this learning unit, the student is able to :** • **understand** and explain the basic techniques of matrix calculus and linear algebra; • **solve** exercises involving these techniques and interpret the results obtained; • **apply** these methods to solving problems encountered in economics and management. • **explain** matrix formalism and its importance as a calculational tool.
Evaluation methods	Summative assessment / The examination is closed book / An exam form is distributed at the examination. The examination includes questions to assess student's basic understanding, cross-cutting questions as well as exercise-style questions similar to those worked on in class. In most cases, questions test both theoretical knowledge and applied skills.
Teaching methods	All parts of the course with the exception of the part dealing with linear programming, are based on the book : «Algèbre linéaire et applications», par David Lay, Pearson, 2012. The book is available from the reprographics unit. The reference book contains a large number of examples and exercises some of which also provide answers. Students are also expected to undertake personal study.
Content	Linear equations & linear algebra. Linear programming Matrix algebra Determinants Vector spaces Eigenvalues and eigenvectors Orthogonality and least squares Symmetric matrices and quadratic forms
Bibliography	« Algèbre linéaire et applications », par David Lay, Pearson, 2012. (Disponible à la reprographie).
Other infos	Course notes for linear programming are available at the reprographics unit.
Faculty or entity in charge	ESPB

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Economics and Management	ECGB1BA	4	BECGE1131	🔍
Bachelor in Economics and Management (French-English)	ECAB1BA	4	BECGE1131	🔍
Bachelor in Economics and Management (French-Dutch-English)	ECTB1BA	4	BECGE1131	🔍