UNIVERSITÀ DI PAVIA

Anno Accademico 2018/2019

DECISIONS AND CHOICES	
Anno immatricolazione	2018/2019
Anno offerta	2018/2019
Normativa	DM270
SSD	SECS-P/01 (ECONOMIA POLITICA)
Dipartimento	DIPARTIMENTO DI SCIENZE ECONOMICHE E AZIENDALI
Corso di studio	ECONOMICS, FINANCE AND INTERNATIONAL INTEGRATION - ECONOMIA, FINANZA E INTEGRAZIONE INTERNAZIONALE
Curriculum	Finance
Anno di corso	1°
Periodo didattico	Secondo Semestre (18/02/2019 - 18/05/2019)
Crediti	6
Ore	44 ore di attività frontale
Lingua insegnamento	English
Tipo esame	SCRITTO
Docente	MOLHO ELENA (titolare) - 9 CFU
Prerequisiti	The contents of the Mathematics basic course and some elementary models in Microeconomics together with some basic knowledge in elementary probability theory are considered as preliminaries.
Obiettivi formativi	The course will offer an organic overview of some tools used in economics and finance models to develop a rational choice theory. The methodological part devoted to the introduction of some fundamental mathematical tools will be completed by examples and applications in economics and finance. The aim of the course is to learn how some important mathematical tools are used in economics and finance. The focus will be on modelling simple situations by use of simple mathematical tools. Besides some optimization and linear algebra techniques, some general skills such as the formalization of a model and use of deductive reasoning will be acquired by the students.

Programma e contenuti

LINEAR MODELS WITH APPLICATIONS TO ECONOMICS AND FINANCE
Matrices and partitioned matrices: basic calculus rules. Linear functions and linear systems: a review. Quadratic forms. Eigenvalues and eigenvectors. Diagonalization of a quadratic form. Applications to models in economics and finance.

OPTIMIZATION MODELS WITH APPLICATIONS TO ECONOMICS AND FINANCE
Functions of many variables: calculus rules. Optimization models without constraints. Implicit functions and comparative statics. Constrained optimization and Lagrange multipliers. Applications to models in economics and finance.

DECISIONS UNDER RISK
Utility and preference representation; Decisions under risk; Von Neumann-Morgenstern model, Absolute and relative risk aversion. Hints on modern approaches to decision theory.

Metodi didattici

The course will consist in lectures and problem sessions. The mathematical results, even if formally enunciated, will not be proved since the focus of the course is on the application of quantitative tools to economic modelling.

Testi di riferimento

P. Simon and L. Blume, Mathematics for economists , New York ; London : Norton, 1994.
D. Kreps, Notes on the theory of choice, Westview Press 1988

Modalità verifica apprendimento

The exam consists of a written test with three problems. Whenever it is possible, the ability to use the quantitative tools introduced in the course to represent and solve a simple economic model will be tested.

Altre informazioni

The exam consists of a written test with three problems. Whenever it is possible, the ability to use the quantitative tools introduced in the course to represent and solve a simple economic model will be tested.

Obiettivi Agenda 2030 per lo sviluppo sostenibile

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