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TIC19_DIP_MAN

Visiting Professor Program
Academic year 2021/2022

DEPARTMENT OF MANAGEMENT

TEACHING COMMITMENT: 14 hours

COURSE TITLE

Mathematics for Business and Finance

TEACHING PERIOD

1st term

SCIENTIFIC AREA

Mathematics

LANGUAGE USED TO TEACH

English
The Degree Course is entirely taught in English

COURSE SUMMARY

MATHEMATICS

Functions of one variable

Definition, domain, codomain, image, graph of a function. Elementary functions and injective, surjective, inverse, composite functions. Bounded, monotone, convex functions. Maximum and minimum of a function.

Limits and continuity.

Notion of limit. Computation of limits and fundamental theorems. Important limits and indeterminate forms. Continuous functions and theorems.

Differential calculus and applications

Notion of derivative and its geometrical meaning, higher-order derivatives, rules of derivation.

Derivatives of elementary functions, of inverse functions and composite functions. Theorems of differential calculus. Monotonicity and convexity tests. Optimum problems. Study of functions.

FINANCIAL MATHEMATICS
Notions of linear algebra.
Vectors, matrices and operations. Functions of two variables.
Definition and domain. Graph and level curves. Continuity and derivability. Partial derivatives and gradient. Differentiability and tangent plane. Problems of unconstrained optimum.
Economic and business applications.

LEARNING OBJECTIVES

Through an intuitive and direct explanation of concepts and mathematical tools, the course allows students to acquire basic knowledge for approaching the study of main economic and business problems. In particular, at the end of the course, the student is expected to be capable of:
- knowing the techniques and the basic mathematical tools commonly used in the solution of problems of economic and financial nature;
- using such techniques and tools to formalize and solve problems;
- being able to communicate the results obtained using a clear and appropriate mathematical notation and language.

TUTORSHIP ACTIVITIES

Classes with Teaching Assistants will be provided, approximately one class after two lectures.

LAB ACTIVITIES

N/A

OTHER ACTIVITIES BESIDES THE COURSE

Seminar on the research field of the VP (if in line with the research topics of the Phd students) will be provided to PhD students

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VISITING PROFESSOR PROFILE

Large experience in teaching Applied Mathematics in English to big groups. Teaching organisation experience required (organising classes for Class Teachers, schedule of classes, managing exams). Good record of publications preferably on Mathematics for Managers.

CONTACT PERSON AT THE DEPARTMENT

Prof.ssa Luisa Tibiletti
luisa.tibiletti@unito.it