UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Metodi Matematici

2122-2-E1802M118

Learning area

Learning objectives

The aim of the course is to give the main tools for the basics of series, integrals and linear algebra. Furthermore, it

Contents

Matematica Generale II: Sequences and series, integrals and linear algebra.

Matematica Finanziaria: The course presents the basic principles of traditional financial mathematics (also known as

Detailed program

2) Integrals: definitions, main results and computation.

3) Linear algebra: matrices, vectors and linear systems.

Matematica Finanziaria:

Capitalization Laws Financial transactions. Amounts, interest, discount. Capitalization laws and ⎯⎯⎯⎯⎯⎯

Annuities and their classification. Value of an annuity in an instant t. Calculation of present and ⎯⎯⎯⎯⎯⎯

Accrued capital. Repayment of a loan. Depreciation.

Financial operations in general: investments / financing, narrowly, side, general, pure. Selection ⎯⎯⎯⎯⎯⎯

Bonds and their valuation: characteristics of a bond and profitability indicators. Term structure, ⎯⎯

Prerequisites

Prerequisites are considered indispensable knowledge and mastery of the typical topics of the ⎯⎯⎯⎯⎯⎯

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Student who do not intend to subscribe to the HONOR CODE can write to their teacher to agree ⎯⎯

Teaching methods

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Assessment methods

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Matematica Finanziaria:

In the emergency period Covid-19 exams will be only remotely managed. They will be carried ⎯⎯⎯⎯⎯⎯

The exams, after the health emergency, will be delivered in ways that will be, subsequently, ⸻

Textbooks and Reading Materials

- "Successioni, serie e integrali", Manuale modulare di Metodi Matematici, vol. 5, a cura di Giovanna Carcano, edizioni Giappichelli Torino

- "Algebra lineare", Manuale modulare di Metodi Matematici, vol. 4, a cura di Maria Ida Bertocchi, edizioni Giappichelli Torino

- S. Stefani, A. Torriero, G.M. Zambruno: "Elementi di Matematica finanziaria e cenni di programmazione lineare" Giappichelli, 5 a ed., 2017