ID

VP144_ESOMAS

Visiting Professor Program
Academic Year 2024/2025

TEACHING COMMITMENT: **24 hours**

COURSE TITLE

Python for Finance

TEACHING PERIOD

1st term

SCIENTIFIC AREA

Statistics; Probability

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

The course aims at presenting some numerical techniques used in financial applications. The students will be working with Python on the following topics:
* Option pricing using binomial trees;
* Monte Carlo methods for option pricing in Black-Scholes model;
* Variance reduction techniques;
* Numerical solution of stochastic differential equations and pricing in non-Black-Scholes markets;
* Computation of Greeks and portfolio immunisation.

LEARNING OBJECTIVES

The course intends to provide students with the main concepts related with the use of Python in order to handle numerical techniques suitable for financial problems. Such up-to-date

methodologies are immediately useful both in the financial industry and in more advanced courses (e.g., PhD level).

VISITING PROFESSOR PROFILE

The Visiting Professor should be a recognized scholar with publications in the areas of financial mathematics. The visiting professor should have a deep knowledge of the mathematical modelling of financial markets. We are also looking for a renowned expert of the numerical methods developed in the field of stochastic calculus. Advanced knowledge and teaching experience in Python programming is also required.

CONTACT REFERENT

Bertrand Lods
bertrand.lods@unito.it