

Bibliographic Reference: Cheliotis, D. (2015). Introduction to Stochastic Calculus [Undergraduate textbook]. Kallipos, Open Academic Editions. http://dx.doi.org/10.57713/kallipos-605

Abstract

The book is intended for advanced undergaduate students in Mathematics departments and covers the following material. a) Conditional expectation, martingales in discrete time (basic properties and applications). b) Brownian motion: Construction, simple properties, strong Markov property, analytical properties, Brownian martingales. c) Construction of the Itô integral and Itô's formula. d) Stochastic differential equations. e) Elements of Financial Mathematics, Pricing of European derivatives, Black-Scholes equation.



The Project is funded by the National Development Programme 2021-2025 of the Ministry of Education and Religious Affairs and implemented by the Special Account for Research Funds of the National Technical University of Athens and the Hellenic Academic Libraries Link.

