

Accademic Year 2002/2003

Course: Derivatives

Syllabus

Futures, Options and Swaps - definitions

Trading strategies – hedging, arbitrage and speculation

Uni-periodal models – Sharpe, Rendleman e Bartter

Fundamental theorems of Asset Pricing

Risk-neutral evaluations

Multi-periodal models – Cox, Ross, Rubinstein

Binomial models

Replicating portfolio techniques

Martingale methods

Stochastic processes for financial markets

Brownian motion and Stochastic Differential Equations

Black, Scholes, Merton model

Replicating portfolio techniques

Martingale methods

Partial Differential Equations techniques

Risk Management: Greeks, Value at risk and Expected Shortfall