

# FINA 6529 Options, Futures, Derivatives

## Executive Summary

**Course:** FINA 6529 Options, Futures, Derivatives  
**Credits:** 2 credits  
**Prerequisites:** MBA 6522

### Description

FINA 6529 builds on FINA 6522 (Financial Risk Management) by focusing on more advanced applications. The course is divided into three modules. The first module covers the multi-period binomial model and the Black-Scholes's model and its applications, including delta hedging, implied volatility, and pricing American options.

The second module covers two HBS cases. The first case focuses on a widely used portfolio strategy, namely, "the portable alpha strategy" and how to use options to improve the performance of the strategy. The second case applies the Black-Scholes framework to a corporate setting and studies the pricing of a convertible bond. We also discuss a wide range of derivative contracts in this module, such as CDS, CDO, corporate bonds, equity linked notes, commodity linked notes, etc.

The third module introduces the students to some recent empirical research on option trading strategies, and the risk-return tradeoff of these strategies.

### Objectives

This course is designed to achieve two main objectives. First, provide students with a rigorous framework used in valuing derivative contracts. This will include an in-depth treatment on the two work horses of the binomial model and the Black-Sholes-Merton model. Second, apply the framework to understand a wide variety of issues related to risk management and investment decisions.