

Exotic Options et produits structurés

**ECTS : 3**

**Description du contenu de l'enseignement :**

This course considers Exotic options and Structured Products based on Equity Derivatives, and focuses on the valuation techniques used to price them. Class is using a learning by doing concept. It is divided into 8 sessions of three hours each, and alternates the teaching of the theory used and practical applications. Local and stochastic volatility frameworks are defined and used to price those instruments by using Monte-Carlo simulations, using Excel®. The hedging of such instruments is considered.

Practical examples are used to build from scratch valuation tools, using Excel® . The course reviews the calibration of models to market data as well as building up local and stochastic volatility surfaces.

Key words : Exotics, structured, equity derivatives, local volatility, stochastic volatility, Monte-Carlo simulation, correlation, hedging costs.

**Compétence à acquérir :**

Hability to price any Equity Derivatives instrument, even with a complicated pay-off, using Excel®.

**Mode de contrôle des connaissances :**

A final project consisting in the pricing of an Equity Derivatives Structured product is the basis for the grading of this course. Each student has to value a specific instrument. However, the type of this instrument is the same for all students, except that the underlying asset(s) is different. Attendance to the course is mandatory.

**Bibliographie, lectures recommandées :**

Quantitative Finance. P.Wilmott.

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