

- Faculté des sciences économiques
- www.unine.ch/seco

Derivatives (5AF2002)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en finance	Cours: 4 ph	écrit: 2 h	6
Master en statistique	Cours: 4 ph	écrit: 2 h	6

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Automne

Equipe enseignante:

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Objectifs:

This course is designed to provide a basic understanding of derivative-related financial instruments (forwards, futures, and options) and introduce the analytics of derivative valuation. Knowledge of basic pricing analysis, use of pricing models, and trading and hedging strategies are developed. Students are first introduced to the basic techniques for pricing, hedging, and other analysis. And then, these techniques will be applied through an introduction of hedging strategies.

Contenu:

1. Mechanics of Futures Markets
2. Hedging Strategies Using Futures
3. Interest Rates
4. Determination of Forward and Futures Prices
5. Mechanics of Option Markets
6. Properties of Stock Options and Trading Strategies Involving Options
7. Binomial Trees
8. Winner Processes and Ito's Lemma
9. The Black-Scholes-Merton Model
10. The Greeks

Forme de l'évaluation:

Midterm: 50%, Final: 2-hour written exam (50%) during the last lecture of the semester
Reexamination session : 2-hour written exam (100%).

Neither documents nor connected devices are permitted during the exams.

In case of violation of these rules, the students are in a situation of fraud and the unauthorized items will be removed. The exam could be deemed as failed.

Documentation:

Hull, John C. Options, Futures, and Other Derivatives, 9th Edition, Pearson, 2014.

Pré-requis:

Microeconomics (bachelor level), Elementary mathematics and probability for economists (bachelor level).

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Forme de l'enseignement:

Lectures: 4 hours per week.