- Faculté des sciences économiques
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Introduction to Financial Derivatives (5EN1002)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Bachelor en mathématiques	**Cours: 4 ph**	**Voir ci-dessous**	6
Bachelor en sciences économiques, orientation économie	**Cours: 4 ph**	**Voir ci-dessous**	6
Bachelor en sciences économiques, orientation management	**Cours: 4 ph**	**Voir ci-dessous**	6

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

Période d'enseignement:

- Semestre Printemps

Equipe enseignante

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Contenu

This course provides an introduction to derivatives on the bachelor level. We will cover in detail:

- Introduction to derivatives
- Trading strategies
- Pricing of forwards and futures
- Distribution-independent properties of options
- Pricing of options using the binomial model
- Structured products
- Recent topics related on derivatives

The course is structured into lectures, exercises, excel tutorials, case studies, a feedback session and a guest lecture.

Forme de l'évaluation

Grading is based on the following components:

- 20%: Oral participation in class
- 30%: Presentation of a case study (which will be allocated during the first lecture)
- 50%: Final exam, 120-minute written exam during the exam session

Retake exam: 2-hour written exam (100%) during the exam session

The final exam and retake exam are open-book. Students are allowed to use a non-programmable calculator and the lecture material.

No connected devices are permitted during the final exam. 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

The main textbooks are:

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

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McDonald, Robert L. (2013): Derivatives Markets, 3rd Edition, Pearson.
Hull, John C. (2017): Fundamentals of Futures and Options Markets, 9th Edition, Pearson.

Pré-requis

Good knowledge and interest in mathematics, probability theory, and quantitative methods.

Forme de l'enseignement

Lectures, exercises, excel tutorials, case studies, a feedback session, and a guest lecture: 4 hours per week.

Objectifs d'apprentissage

Au terme de la formation l'étudiant-e doit être capable de :

- Explain the price behaviour of futures, forwards, and options
- Illustrate trading strategies associated with derivatives
- Compute the fair value of a derivative
- Calculate the price of a derivative with the help of a statistical software programme

Compétences transférables

- Present the solution of a case study in a small team in front of your classmates
- Discuss the implications of your findings with your professor
- Prepare the solution of a case study related to derivatives markets