

- Faculté des sciences économiques
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Risk Management (5AF2026)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en finance	Cours: 2 ph	Voir ci-dessous	3

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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Contenu

This course provides an introduction to financial risk management techniques on the master level.

We will cover in detail:

- Risk and risk management in perspective
- Risk measures
- Volatility modelling
- Dependence modelling
- Hedging techniques for market risk
- Management of credit risk
- Case studies on risk management failures

The course is structured into lectures, exercises, programming tutorials, guest lectures, and case study presentations.

Forme de l'évaluation

Grading is based on the following components:

- 20%: Oral participation
- 30%: Case study presentation (which will be allocated during the first lecture)
- 50%: Final 120-minutes written exam during the exam session at the end of the semester

The final exam is 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.

Modalités de rattrapage

Retake exam: 120-minutes written exam (100%) during the exam session

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

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No connected devices are permitted during the retake 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, J.C. (2018): Risk Management and Financial Institutions, Wiley Finance Series, 4th Edition
McNeil, A.J.; Frey, R.; Embrechts, P. (2015): Quantitative Risk Management: Concepts, Techniques and Tools, Princeton University Press
Danielsson, J. (2011): Financial Risk Forecasting, Wiley Finance Series
Jorion, P. (2011): Financial Risk Manager Handbook, Wiley Finance Series, 6th Edition
Christoffersen, P. (2016): Elements of Financial Risk Management, Academic Press, 2nd Edition

Pré-requis

Mandatory courses of the M.Sc. Finance program in the 1st and 2nd semester; good knowledge in quantitative methods, derivatives, and portfolio management.

Forme de l'enseignement

Lectures, exercises, programming tutorials, guest lectures, and case study presentations: 2 hours per week

Objectifs d'apprentissage

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

- Compare the differences between financial regulations (e.g., Basel I and Basel II)
- Explore the main principles in modelling credit risk
- Apply time-series analysis to forecast risk factors
- Calculate dependence measure between different financial assets
- Interpret the major risk measures in finance (e.g. VaR and Expected Shortfall)

Compétences transférables

- Discuss the implications of your findings with your professor
- Present the solution of the project in front of your classmates
- Prepare the solution of a project related to risk management