

- 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
- Management of liquidity risk

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

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

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.

Documentation

The main textbooks are:

URLs	1) https://moodle.unine.ch/course/view.php?id=6727
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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