



*Course syllabus*

# Värdering och hantering av finansiell risk Financial Valuation and Risk Management

**EXTQ35, 7,5 credits, A (Second Cycle)**

**Valid for:** 2023/24

**Faculty:** Faculty of Engineering, LTH

**Decided by:** PLED I

**Date of Decision:** 2023-04-14

## General Information

**Elective for:** F4, F4-fm, I4-fir, Pi4-fm

**Language of instruction:** The course will be given in English

## Aim

The objective of this course is to give the students an understanding and hands on knowledge of basic methods within risk management.

## Learning outcomes

### *Knowledge and understanding*

For a passing grade the student must

The student shall understand:

- advanced models for financial risk management,
- Basel regulations.

### *Competences and skills*

For a passing grade the student must

Students shall have the ability to independently apply their knowledge to real world problems. In particular they shall be able to:

- implement methods for estimating financial risk,
- implement tests for evaluating the quality of the methods used to estimate financial risk,
- identify the finance-related problems in the real-world and to incorporate adequate methods and theories to analyse these problems,
- conduct a clear and pedagogical report of their own and others' empirical analyses.

Students shall also have sufficient competence to individually write an empirically orientated paper.

#### *Judgement and approach*

For a passing grade the student must

Students shall have developed:

- learning skills that allow for further study in finance and economics,
- an ability to independently search for and evaluate information from risk management literature within finance.

## Contents

The objective of this course is to give the students an understanding and hands-on knowledge of fundamental methods within financial risk management. The course deals with two main topics: measurement and management of market risk and measurement and management of credit risk. The course begins with an overview of risk management in general with the Basel legislation as a real world backdrop. This is followed by a discussion of the theoretical properties of risk measures, in particular VaR (Value-at-Risk), ES (Expected shortfall) and systemic risk. The course continues with practical aspects and implementation of methods used to actually measure VaR, ES and systemic risk. This is followed by a general discussion of credit risk and to apply models to measure credit risk.

## Examination details

**Grading scale:** TH - (U,3,4,5) - (Fail, Three, Four, Five)

**Assessment:** Examination: Examination consists of group assignments and a written examination that takes place at the end of the course. There will be further opportunities for examination close to this date.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

## Admission

**Admission requirements:**

- EXT45 Financial Management
- FMS012 Mathematical Statistics, Basic Course or FMSF45 Mathematical Statistics, Basic Course or FMSF80 Mathematical Statistics, Basic Course

**The number of participants is limited to: 60**

**Selection:** Completed university credits within the programme. Priority is given to students enrolled on programmes that include the course in their curriculum.

**The course overlaps following course/s:** TEK180, NEKM41, NEKN83

## Reading list

- Hull, John C.: Risk Management and Financial Institutions, fifth edition. Wiley Finance, 2018, ISBN: 978-1-119-44811-2.
- Supplementary material.

## Contact and other information

**Course coordinator:** Anders Vilhelmsson, [anders.vilhelmsson@nek.lu.se](mailto:anders.vilhelmsson@nek.lu.se)

**Course homepage:** <http://www.nek.lu.se>

**Further information:** Identical to NEKN83