



School of Economics and Management

## **NEKN83, Economics: Financial Valuation and Risk Management, 7.5 credits**

*Nationalekonomi: Värdering och hantering av finansiell risk, 7,5  
högskolepoäng*  
Second Cycle / Avancerad nivå

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### **Details of approval**

The syllabus is an old version, approved by The Board of the Department of Economics on 2011-06-07 and was last revised on 2016-10-04. . The revised syllabus applied from 2016-10-04. , spring semester 2017.

### **General Information**

This is a single subject master course in economics belonging to the 'Financial Economics' specialisation. The course is either obligatory or optional within a number of master programmes at Lund University.

*Language of instruction:* English

Teaching is in English. (In some semesters the course can be taught in Swedish, see the appropriate application catalogue).

*Main field of studies*

Economics

*Depth of study relative to the degree requirements*

A1N, Second cycle, has only first-cycle course/s as entry requirements

### **Learning outcomes**

#### **Knowledge and understanding**

The goal of the course is to develop the students' understanding of models for financial risk management and their ability to apply these models to real word problem. More specifically, the students upon completion of the course shall have the ability to understand:

- VaR (Value-at-Risk),
- ES (Expected shortfall),
- Market risk,

- Credit risk,
- Basel regulations,
- Interest rate swaps (IRS) and swaptions,
- Credit Default Swaps (CDS).

### **Competence and skills**

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 VaR and ES,
- implement tests for evaluating the quality of VaR and ES estimators,
- implement methods for estimating credit risk,
- implement methods for pricing interest rate swaps and CDS,
- 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.

### **Judgement and approach**

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,
- an ability to independently conduct a master thesis.

### **Course content**

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) and ES (Expected shortfall). The course continues with practical aspects and implementation of methods used to actually measure VaR and ES. This is followed by a general discussion of credit risk and to apply models to measure credit risk. A major part of the course will focus on the management of credit risk by using derivative instruments such as interest rate swaps, swaptions, and CDS, as well as pricing these instruments.

### **Course design**

1. Teaching: Tuition consists of lectures and computer labs.

### **Assessment**

1. Examination: Examination consists of a written examination that takes place at the end of the course. There will be further opportunities for examination close to this date. In addition, there are a number of compulsory computer exercises.

2. Limitations on the number of examination opportunities: –

The University views plagiarism and other academic dishonesty very seriously, and will take disciplinary action against students for any kind of attempted malpractice in connection with examinations and assessments. Plagiarism is considered to be a very serious academic offence. The penalty that may be imposed for this, and other unfair practices in examinations or assessments, includes suspension from the University for a specified period.

*Subcourses that are part of this course can be found in an appendix at the end of this document.*

## Grades

Marking scale: Fail, E, D, C, B, A.

1. Grading: Grade (Definition), Points or percentage out of maximum points, Characteristic

A (Excellent), 85–100, A distinguished result that is excellent with regard to theoretical depth, practical relevance, analytical ability and independent thought.

B (Very good), 75–84, A very good result with regard to theoretical depth, practical relevance, analytical ability and independent thought.

C (Good), 65–74, The result is of a good standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

D (Satisfactory), 55–64, The result is of a satisfactory standard with regard to theoretical depth, practical relevance, analytical ability and independent thought.

E (Sufficient), 50–54, The result satisfies the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought, but not more.

U (Fail), 0–49, The result does not meet the minimum requirements with regard to theoretical depth, practical relevance, analytical ability and independent thought. Students have to receive a grade of E or higher in order to pass a course.

2. Weighting grades from different parts of the course: –

3. Grading scales for different parts of the course: –

## Entry requirements

Students admitted to the Master Programme in Economics are qualified for this course. For other students, at least 90 ECTS-credits in economics are required. These must include a course in basic financial economics, an intermediate course in microeconomics (e.g., NEKG21 "Intermediate Microeconomic Analysis"), and an intermediate course in econometrics (e.g., NEKG31 "Econometrics") or equivalent Courses.

## Further information

1. Transitional regulations: This course replaces NEKM41 "Financial Valuation and Risk Management".

2. Limitations in the period of validity: –

3. Limitations: This course may not be included in the same degree as NEK725 "Financial Valuation and Risk management", NEKM41 "Financial Valuation and Risk management", TEK180 "Financial Valuation and Risk Management", NEKN86 "Financial Risk Analysis" or NEKN87 "Fixed Income and Derivatives".

4. Similar courses: –
5. Limitations in renewed examination: –

## Subcourses in NEKN83, Economics: Financial Valuation and Risk Management

Applies from V12

1101 Financial Valuation and Risk Management, 7,5 hp  
Grading scale: Fail, E, D, C, B, A