KAN-CFIVO1007U Derivatives and Fixed Income 2015/2016

English Title
Derivatives and Fixed Income

Language	English
Course ECTS	7.5 ECTS
Type	Mandatory
Level	Full Degree Master
Duration	One Semester
Start time of the course	Spring
Timetable	Course schedule will be posted at calendar.cbs.dk
Study board	Study Board for MSc in Economics and Business Administration

Course coordinator

- Remy Praz - Department of Finance (FI)

Contact information: https://e-campus.dk/studium/kontakt

Main academic disciplines

- Finance

Learning objectives

To achieve the grade 12, students should meet the following learning objectives with no or only minor mistakes or errors: The aim of the course is to provide the student with the skills necessary to:

- understand and explain the payoff and risk properties of the main types of derivative securities
- understand and explain how derivative securities can be used for risk management
- understand, explain, and apply the central methods and models for the pricing of derivative securities

Examination

Derivatives and Fixed Income:

Exam ECTS	7,5
Examination form	Written sit-in exam
Individual or group exam	Individual
Assignment type	Written assignment
Duration	4 hours
Grading scale	7-step scale
Examiner(s)	One internal examiner
Exam period	Spring
Aids allowed to bring to the exam	Limited aids, see the list below: • Books and compendia brought by the examinee • Allowed dictionaries • Allowed calculators • Notes in paper format brought by the examinee • Additional allowed aids, please see the list below
Make-up exam/re-exam	Same examination form as the ordinary exam If the number of registered candidates for the make-up examination/re-take examination warrants that it may most appropriately be held as an oral examination, the programme office will inform the students that the make-up examination/re-take examination will be held as an oral examination instead.

Course content and structure

The course deals with the properties, the applications, and the pricing of derivative securities. More specifically, the topics include

- general properties, applications, and pricing results for forwards and futures
- option strategies
- review and refinements of binomial models
- introduction to Brownian motions
- the Black-Scholes option pricing model
- the Black 76 model for options on forwards/futures
- hedging strategies and the "Greeks"
- volatility smiles
- tree-based interest rate models
- continuous-time interest rate models
- pricing of interest rate derivatives (such as bonds, swaps, futures, options on bonds, caps, floors, swaptions)
- Monte Carlo simulation

Excel is used wherever relevant.

Teaching methods

Lectures and exercises

Student workload

Lectures	33 hours
Preparation for lectures	66 hours
Exercise classes	14 hours
Preparation for exercise classes	70 hours
Exam	4 hours
Final preparation for exam	19 hours

Expected literature

Hull: Options, Futures, and Other Derivatives; 9th global ed., 2014, Pearson

Last updated on 16-12-2015