Master's program in Financial Mathematics (121-160) 40 credits

COURSES IN ENGLISH

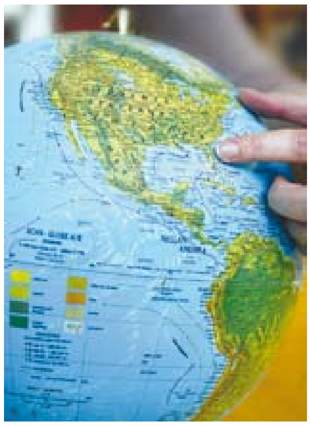
Usually specialists from economical departments are well prepared to deal with economical ideas and the specialists in Mathematics and Physics are very good in dealing with differential equations. This is a course which covers both these areas of expertise. There are many such programs in the USA, few in Europe and in Sweden it is unique.

This one year program (40 Swedish credits, 60 ECTS credits) in Financial Mathematics will prepare for work with modern models of the financial world. The latest developments in financial science lead to very sophisticated models based on stochastic differential equations, non-linear partial differential equations and other mathematical tools. The models are treated with analytical and numerical methods. The master's program will give the necessary methematical as well as financial background to solve most urgent problems.
The program is closely related to the research activity at the university since most of the teaching is carried out by active researchers of financial mathematics.

The main courses within this program are:

Stochastic Models, mainly directed towards concepts, notions and results of discrete and continuous stochastic models in finance mathematics.

Geometrical properties of differential equations, provides the geometrical background for the concept of a differential equation, for the Lie group analysis as a very powerful and elegant method to solve and to interpret the equations.



Foundations of financial markets, gives an introduction to the main ideas behind the stocks market, options and other derivative products, different portfolio theories, hedging methods and arbitrage possibilities.

Numerical methods in Finance, focuses on the most modern tools in numerical mathematics in application to financial models.

Differential equations in Financial Mathematics, dealing with the Black-Scholes model and its variations which is at present actively used in bank systems.

Theory of pricing in Stochastic financial models, which provides knowledge of advanced models on financial markets.

Application of Lie algebras for solving differential equations directed on the theory of Lie algebras and to its applications to differential equations.

Degree

Magisterexamen i Finansiell Matematik with the English translation Master in Financial Mathematics.

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Entry requirements

Students should be prepared at the level of bachelor's degree, or equivalent. Basic mathematical knowledge should have been obtained on the level of 40 credits in mathematics including 5 credits of mathematical statistics and basic knowledge of differential equations (5 credits level).

The programme is given in English. Applicants must have written and verbal command of the English language.

Last date for application is 1 April 2006, for the programme starting at the end of August 2006.

Selection

Selection will be based on the qualifying education.

Contact information

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