



University of Twente
Enschede - The Netherlands

Master of Science Programme

Financial Engineering and Management

Over the past decade, the increasing complexity of financial products, the size of the markets, and the ever increasing variety in the products traded have generated a growing demand for skilled professionals to create, price and hedge complex derivatives and, more generally, to manage risk. Acquiring such skills requires mastering both mathematical and managerial knowledge. To meet this demand, the Department of Finance and Accounting (in co-operation with the Department of Applied Mathematics) offers a master's track in financial engineering and risk management. Teaching and research are conducted under the auspices of the Financial Engineering Laboratory (FELab), a co-operative structure set up by the two departments.

Students are trained to identify and quantify risk. Moreover, they should be able to determine the extent to which risk should be dealt with using financial engineering instruments or other types of solutions, such as reengineering business processes, adapting the firm's strategy, switching customers/suppliers or taking different investment decisions. Students will also benefit from comprehensive management training, learning to apply strategic skills to manage the firm's innovation and technology.

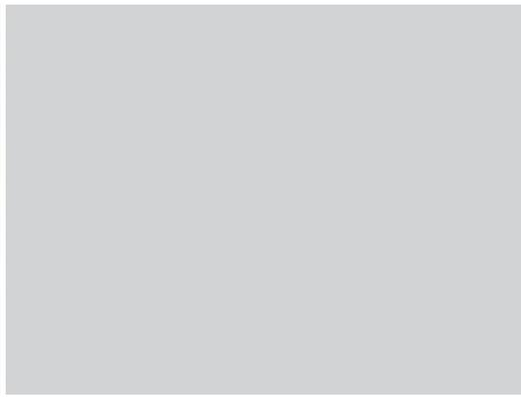
Programme structure

Financial Engineering and Management is one of the tracks within the Industrial Engineering and Management (IE&M) Master's degree programme. The language of instruction is English. The IE&M programme is designed for individuals from the Netherlands and abroad who hold an undergraduate degree in such fields as engineering, management, economics and mathematics.

IMPROVE YOUR POSITION

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THE MASTER DEGREES
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The IE&M programme consists of 120 European Credits (EC), as part of which you will follow a number of joint – i.e. offered to students of all IE&M tracks – courses (25 EC), viz. *Simulation, Empirical Research and Data Analysis, Management and Organization of Technological Innovation, Management of Technology (general part) and Organization and Strategy.*

In addition to these common courses, you will follow track-specific courses (65 EC) and write a master's thesis (30 EC).

Track-specific courses, for example:

- Two equalisation courses
- Introduction to Investment Theory
- Statistics and Probability
- Mathematical Finance
- Risk Management
- Financial Econometrics
- Micro Economics
- Structured Products
- Special Topics in Financial Engineering
- Business Taxation
- Financial Accounting
- Management Control for Financial Institutions
- Management of Technology (track-specific part)

Master's thesis

The final part of the IE&M programme, the master's thesis (30 EC) gives you the opportunity to integrate the various tools learned and apply them to a real-world situation either at the university or at a company. In either case, the problem you address will be closely related to actual practice. The large amount of time devoted to the internship ensures that the project involves a substantive (risk management and financial engineering) problem confronting a business organization. Although you will be in charge of finding your own graduation assignment, you can expect a great deal of support from the faculty.

Career prospects

Risk is prevalent in today's world. People skilled in valuing and hedging risks are – and will continue to be – in high demand. Financial engineering graduates enjoy a wide array of career opportunities where they can apply the tools they have learned. Working for an investment bank or an insurance company is one career option, but by no means the only one. Skills necessary to price and manage complex risks are also highly valued by non-financial corporations. For example, all internationally active firms must hedge foreign exchange risk, and firms transforming raw materials have to manage volatile commodity prices. Finally, financial engineering graduates may also pursue other avenues of professional development, including consultancies, software companies and regulatory institutions.

Additional information

The IE&M Master's degree programme is a dynamic programme. Regularly consult our website www.graduate.utwente.nl for the latest developments.

The website also presents information on such aspects as: tracks, courses, admission requirements and registration.

For more specific information about FEM you can also look at www.felab.utwente.nl.

If you have further questions regarding this track or the IE&M Master's degree programme, please contact the IE&M programme information desk by e-mail at master@utwente.nl or by phone on +31 (0)53 489 5489.

