EM 1: Information & Service Management
Nowadays service markets are characterized by a strong interrelation with information service management due to the original set-up of service markets. The overall objective of the module is therefore to provide fundamentals of market engineering with an emphasis on the design and the further development of information markets and services.

The module enables participants to understand and analyze business innovation & adaption processes and thus get an idea of, among other things, innovation diffusion. Innovation driver analyses make participants systemically identify the difference between invention and innovation.

Since the structure of information markets is discussed participants are able to develop an understanding for the action of market actors. In addition, consideration of service competition as a business strategy helps participants structure the impacts of service competition on the design of businesses, markets, products, processes, and services.

EM 2: Global Financial Markets
Open up any quality newspaper and you see that global financial markets matter a great deal. Nearly all employers are directly concerned with financial markets and how to build optimal portfolios.

It is the goal of this module to shed light on both questions. This module introduces theoretical and empirical insights to understand global financial markets. The main focus is on building valuable intuition that will turn out to be very useful for advanced courses and for the professional career.

Participants will understand the main risk/return characteristics of equity and fixed-income markets from a conceptual and empirical point of view. There are scientific reasons for why in the long-run equity beats bond investments, and why it is even more advantageous to combine both asset classes into a single portfolio.

EM 3: Fundamentals in Financial Engineering
Financial Engineering is an important component of quantitative finance and risk & asset management.

This module introduces and applies essential financial engineering tools to applications from corporate finance and quantitative asset/risk management. For the corporate finance applications, this module teaches how managers optimize the financing structure and the dividend policy of firms. For the asset/risk management application, the module conveys essential quantitative and computational tools to build superior forecasting models for expected returns and risks of equity and fixed-income investments.

EM 4: Advanced Financial Engineering
This module provides a unifying approach to the pricing of derivative securities. Moreover, the most important concepts pertaining to term structure modeling are discussed and participants are introduced to the efficient use and implementation of pricing and risk management methods on derivative and fixed income securities markets.

The participants develop an understanding of the underlying evaluation theory, realize its limitations, and apply economic and mathematical approaches to analyze and understand financial products. Tools of risk management enable the participants to carry out major risk assessments and sensitivity analyses. They learn how to use computer-assisted methods for implementation of evaluation and risk management methods.

During the course on derivatives, they thoroughly cope with financial and derivative markets, study static and dynamic trading strategies and conceive option price theory as a central approach to assessing derivative instruments.

During the course on fixed income, the participants get acquainted with the central concept of yield curve, apply option price theory to assess interest derivatives and acquire the ability of managing interest change risks.

EM 5: Risk Management
The module provides a comprehensive introduction to financial and economic aspects of risk management.

Participants will understand the main risk/return characteristics of equity and fixed-income markets, and learn how to assess risk and return of These two commodities.

The focus is on developing an understanding of the underlying concepts and methods for implementation of evaluation and risk management methods on derivative and fixed income securities markets.

The participants develop an understanding of the underlying evaluation theory, realize its limitations, and apply economic and mathematical approaches to analyze and understand financial products. Tools of risk management enable the participants to carry out major risk assessments and sensitivity analyses. They learn how to use computer-assisted methods for implementation of evaluation and risk management methods.

During the course on derivatives, they thoroughly cope with financial and derivative markets, study static and dynamic trading strategies and conceive option price theory as a central approach to assessing derivative instruments.

During the course on fixed income, the participants get acquainted with the central concept of yield curve, apply option price theory to assess interest derivatives and acquire the ability of managing interest change risks.

The graduates will be familiar with approaches to the dynamic optimization of risk-return profiles that are, for example, of importance to asset management in insurance companies or investment funds. Additionally, they are acquainted with the possibilities of engineering contracts for transfer of selected risks and know that trading with such tools is an important risk management strategy.

During the courses on insurance, risk analysis and asset liability management, and credit risk and operational risk, the participants thoroughly cope with all these aspects of risk management and the limitations of the relevant methods. Hence, they are well prepared for career paths in e.g., banks, capital investment companies, insurance companies, consulting firms, and finance departments in large industrial enterprises in Germany and abroad.

Order your free course guide book with detailed contents of the Master Program!