Welcome to the School of Business and Economics



MSc Econometrics and Operations Research

Applying mathematical methods to economic problems

Dries Vermeulen
Professor of Game Theory



Why should you choose Econometrics and Operations Research?

- Be interested in applying mathematics and statistics to economics and business
- High quality courses
- Small group teaching
- Excellent career perspectives
- Use of dedicated software
- Close links to the corporate world

What will you learn? (1)

Improve economic decisions in business and the public sector

- Apply, improve and develop models based on mathematics and statistics
- Implement the models using existing or newly developed computer software
- Instantiate the computer models with data and interpret the results
- Control for robustness and sensitivity of the model



What will you learn? (2)

Four specialisations:

- Actuarial Sciences
- Econometrics
- Mathematical Economics
- Operations Research

Also the flexibility to select a curriculum according to your own wishes

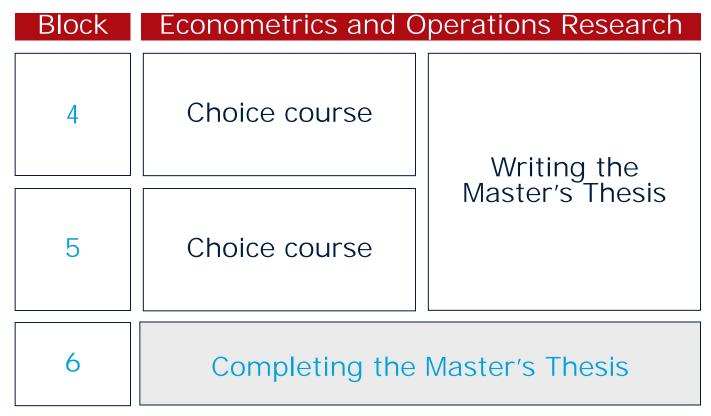


What is the programme structure? (1)

Econometrics and Operations Research Block Game Theory and Optimisation Stochastic Processes Choice course Choice course Skills Training



What is the programme structure? (2)



NB. The details of this programme could change; before applying, please check www.maastrichtuniversity.nl/sbe for the latest information.



What is the programme structure? (3)

At least three out of four choice courses should be chosen from the list of E&OR core courses:

- Time Series Methods and Dynamic Econometrics
- Life Insurance I
- Life Insurance II
- Mathematical Finance
- Econometrics Methods for Cross-Sectional and Panel Data
- Empirical Analysis of Financial Markets
- Social Choice Theory
- Industrial Economics
- Equilibrium Theory and Financial Markets
- Algorithms and Optimisation
- Modelling and Solver Technology
- Operations Research Applications
- High-Dimensional Econometric Methods for Big Data



What is the programme structure? (3)

At most one out of four choice courses should be chosen from the list of other Elective courses:

- Capita Selecta Quantitative Economics
- ECB and Monetary Policy
- Growth and Innovation in Europe
- Open Macroeconomics in a Global Society
- Risk Management
- Supply Chain Operations
- Supply Chain Strategy



Specialisation: Actuarial Sciences

Applying mathematics and statistics to assess risks in insurance and finance

Core courses:

- Stochastic Processes
- Time Series Methods and Dynamic Econometrics
- Life Insurance I
- Life Insurance II
- Mathematical Finance

- Topics in Computational Actuarial Methods
- Writing a Master's Thesis



Specialisation: Econometrics

Analysis and testing of economic relationships

Core courses:

- Stochastic Processes
- Time Series Methods and Dynamic Econometrics
- Econometrics Methods for Cross-Sectional and Panel Data
- Empirical Analysis of Financial Markets

- Topics in Computational Econometrics
- Writing a Master's Thesis



Specialisation: Mathematical Economics

Modelling strategic behaviour

Core courses:

- Game Theory and Optimisation
- Social Choice Theory
- Industrial Economics
- Equilibrium Theory and Financial Markets

- Topics in Computational Econometrics
- Writing a Master's Thesis



Specialisation: Operations Research

Optimisation of business processes

Core courses:

- Game Theory and Optimisation
- Algorithms and Optimisation
- Modelling and Solver Technology
- Operations Research Applications

- Operations Research Software
- Writing a Master's Thesis



Master's Thesis

- Study a practical or theoretical problem within the track of your choice
- Combine your master's thesis with an internship this is strongly recommended!
- Support offered via the TIP program

Research Master: 2 years

- Includes more experience in doing research, both fundamental and executive.
- Prepares for a PhD
- Operations Research variant:
 - Part of the Business Research master
 - Year 1 is very similar to the OR variant of Ect&OR master (master's thesis is replaced by two electives, last skill is replaced by a handson research project)
 - Year 2 deepens OR knowledge with courses of the Dutch network LNMB in Utrecht. Master's thesis is 30 ECTS and can be fullfilled through an internship.



Research Master: 2 years

- Econometrics/Mathematical Economics research variant:
 - Part of the 2 years METEOR Research MSc in Economic and Financial Research
 - Year 1 is very similar to the Ect/MathEcon variant of Ect&OR master (master's thesis is replaced by two core courses of the research master and the last skill is replaced by a hands-on research project)
 - Year 2 is made out of the specialisation courses and electives from the EFR programme. The fourth semester is devoted to a 30 ECTS Master's thesis.

Is Econometrics and Operations Research right for you?

Have a solid knowledge in bachelor's level subjects which are fundamental for your choice of subjects in the master's programme

What are your career prospects?

- Top analyst positions in business or the public sector
- World class PhD programmes
- Academic, research and development careers
- Managerial careers
- Banks, insurance companies, policy advice
- IT development, IT consultancy
- Positions that have been reported by our alumni:

http://scope-vectum.nl info@scope-vectum.nl



MSc – Econometrics and Operations Research



72 graduates Employed in 13 countries



Actuary
Analytical Consultant
Data Scientist
Financial Advisor



MSc graduates SBE Econometrics and Operations Research period 2004-2015



MSc – Econometrics and OR Track Mathematical Economics



14 graduates Employed in 3 countries



Analytical Consultant Research Analyst Risk Advisor Sales Analyst



MSc graduates SBE Econometrics and OR Track Mathematical Economics period 2004-2015



MSc – Econometrics and OR Track Operations Research



14 graduates Employed in 3 countries



Business Consultant
Software Engineer
Trading Innovation Manager
Technical Consultant



MSc graduates SBE Economics and OR Track Operations Research period 2004-2015



MSc – Econometrics and OR Track Econometrics



67 graduates
Employed in 14 countries



Business Intelligence Analyst

Econometrician

Consultant

Risk Analyst



MSc graduates SBE Econometrics and OR Track Econometrics period 2004-2015



MSc – Econometrics and OR Track Actuarial Science



18 graduates Employed in 4 countries



Actuary
Consultant
Investment Manager
Product Controller







ABN·AMRO



MSc graduates SBE Econometrics and OR Track Actuarial Science period 2004-2015

Further questions?

www.maastrichtuniversity.nl/sbe

> Contact

Or visit us at the information market in the Mensa