TUM Master's Days 2025

Master's Programs in Mathematics



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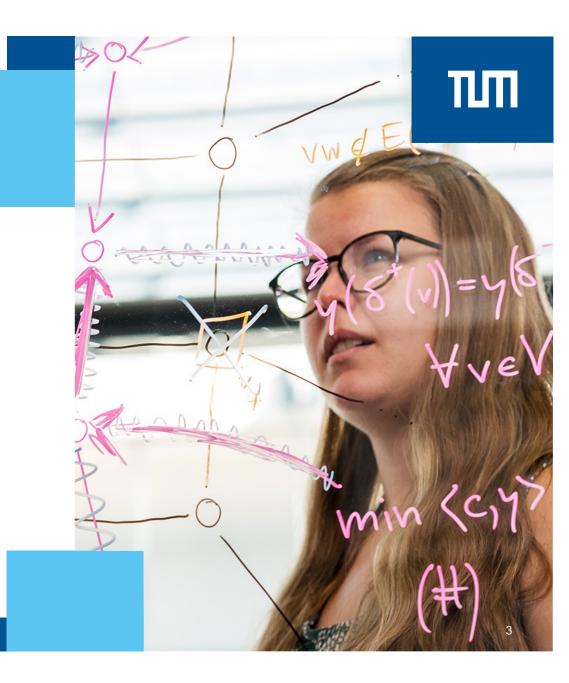
Mathematics@TUM

- top address in mathematics
- wide variety of courses
- focus on applications
- specialized degree programs
- great reputation in the labor market
- great research opportunities



General Characteristics

- four semester program
- 120 ECTS credits
- Ianguage: English
- exchange programs
- mandatory internship





Master's Study Programs in Mathematics



Mathematics in Science and Engineering



Mathematics in Data Science



Mathematical Finance and Actuarial Science



Mathematics in Science & Engineering

- Applied Analysis & Differential Equations
- Mathematical Modelling
- Scientific Computing
- Applications: Engineering, Health, Automotive, Computing, etc.



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Mathematics in Science & Engineering

Modules

- Analysis and Differential Equations
- Numerics & Scientific Computing
- Optimization
- Case Studies
- Applications (individual specialization)

Prerequisites

- BSc in Mathematics or Engineering (math. focus)
- Vector Analysis
- Nonlinear Optimization
- Differential Equations
- Numerics of Differential Equations

Mathematics in Data Science

- Statistics, Data Analytics, Optimization
- Machine Learning, Artificial Intelligence
- Data Engineering
- Distributed Computing
- Computer Science



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Mathematics in Data Science

Modules

- Data Analysis
- Data Engineering
- Statistics, Optimization, Mathematics of Machine Learning
- Data Mining, AI, ML
- Database Systems, Cloud Computing

Prerequisites

- BSc in Mathematics / Informatics
- Algorithms and Data Structures
- Databases



Mathematical Finance and Actuarial Science

- Finance, Risk, Portfolio Theory
- Insurance Mathematics
- Statistics, Probability Theory
- Econometrics
- Management



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Mathematical Finance and Actuarial Science

Modules

- Specializiation: Math. Finance or Actuarial Science
- Probability Theory & Statistics
- Applied and Pure Mathematics
- Management

Prerequisites

- BSc in Mathematics
- Statistics
- Probability Theory (based on measure theory)



Mathematics

- wide variety of courses
- optional focus
- optional minor informatics, physics, economics, chemistry, life sciences





Mathematics

Modules

- Analysis & PDE
- Algebra & Geometry
- Probability
- Scientific Computing
- Optimization
- Biomathematics

Prerequisites

• BSc in Mathematics



Application & Prerequisites

- BSc in Mathematics
- good grades, \geq 140 credits to apply
- qualifications: advanced math
 + specific modules
- letter of motivation
- language certificate (EN)
- document verification (Uni Assist)
- APS certificate (selected countries)



Additional Documents for Data Science

- BSc in Mathematics / Informatics
- qualifications: advanced math
 + informatics modules
- Ietter of motivation + essay
- language certificate (EN)
- GRE (selected countries)



Tuition Fees (non-EU)

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- no fees for EU / EEA students
- no fees with Germa info session "fees and scholarships"
- fees: 6000,- € per ser
- merit scholarships
- waiver programs for students in need

28 March at 10:30

Exchange Programs



- ERASMUS+, TUMExchange
- partner universities partner world
- Austria, Belgium, Czech Finland, France, Hungary, Netherlands, Norway, Portual, Slowenia, Spain, Sweden, Switzerland, Turkey, UK
- cooperation partners in Argentina, Brazil, Mexico, Canada, US, South Africa, China, India, Vietnam, Japan, Australia, and many more

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Questions?



Anja Hoffmann

General Questions MSc Mathematics



Michael Ritter

General Questions MSc Mathematics in Data Science



Diana Conache Admissions



Aleksey Min

MSc Mathematical Finance and Actuarial Science



Markus Muhr

MSc Mathematics in Science and Engineering