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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
- language: 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

Mathematics in Science & Engineering

TUM

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

Mobility
Engineering
Logistics Simulations
Development
Research
Health
Computing
Software
Safety
Consulting

SIEMENS

KUKA

Linde



bertrandt

BRAINLAB



AIRBUS

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



Spotify®



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



Mathematical Finance and Actuarial Science

Modules

- Specialization: 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



A word cloud of industry sectors including: Software, Security, Health, Consulting, Analytics, Computing, Finance, Controlling, Simulations, Banking, and Communications.



Mathematics

Modules

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

Prerequisites

- BSc in Mathematics

Application & Prerequisites

- BSc in Mathematics
- good grades, ≥ 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
- letter of motivation + essay
- language certificate (EN)
- GRE (selected countries)



Tuition Fees (non-EU)

- no fees for EU / EEA students
- no fees with German public
- fees: 6000,- € per semester
- merit scholarships
- waiver programs for students in need




info session “fees and scholarships“
28 March at 10:30



Exchange Programs

- ERASMUS+, TUMExchange
- partner universities across the world
- Austria, Belgium, Czech Republic, Denmark, Finland, France, Hungary, Italy, Japan, Korea, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, UK
- cooperation partners in Argentina, Brazil, Mexico, Canada, US, South Africa, China, India, Vietnam, Japan, Australia, and many more



info session “going abroad “:
today at 15:00

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