Master's Programs in Mathematics

TUM Master's Days 2024

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Studying Mathematics

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Mathematics @ TUM

- top address in mathematics
- wide variety of courses
- great choice of minor modules
- great reputation in the labor market
- specialized degree programs
- English as language of instruction
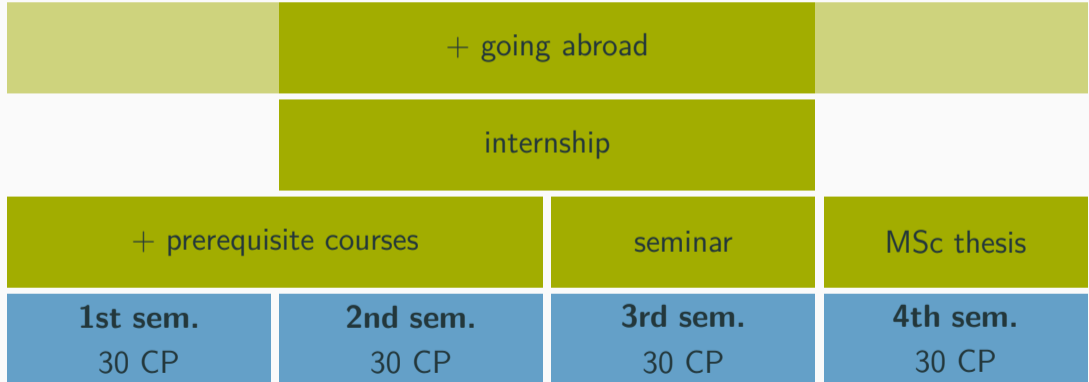
Study Programs @ TUM

Study Programs

Mathematics

 Math. Fin. & Act. Science

Math. in Science & Engineering

 Math. in Data Science

General Structure

	+ going abroad		
	internship		
+ prerequisite courses		seminar	MSc thesis
1st sem. 30 CP	**2nd sem.** 30 CP	**3rd sem.** 30 CP	**4th sem.** 30 CP

Math. Finance & Actuarial Science

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

Math. Finance & Actuarial Science

Modules
- Specialization:
  Math. Finance or Act. Science
- Prob. Theory / Statistics
- Applied / Pure Math
- Management

Specific Prerequisites
- math bachelor
- intro in prob. and stat.
- measure-theoretic prob. theory

Mathematics in Data Science

- Statistics, Data Analytics, Optimization
- Machine Learning, Data Engineering
- Computer Science

Mathematics in Data Science

Modules
- Foundations in DA / DE
- DA (MA): Statistics, Optimization, Math. Foundations of ML
- Analytics (MA/IN): Data Mining, Machine Learning
- DE (IN): Database Systems, Cloud Computing

Specific Prerequisites
- math bachelor
- informatics minor
- algorithms
- databases

Mathematics in Science & Engineering

- Scientific Computing
- Applied Analysis
- Applications: Engineering, Health, Informatics, …

Mathematics in Science & Engineering

Modules
- Applied Analysis
- Scientific Computing
- Optimization
- Case Studies
- Applications (individual specialization)

Specific Prerequisites
- math bachelor
- vector analysis
- differential equations
- numerics

Mathematics

- wide variety of subjects
- optional area of concentration
- optional minor

Mathematics

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

Optional Minor
- Informatics
- Physics
- Economics
- Chemistry, Life Sciences

Application & Prerequisites

Prerequisites

- math bachelor (or closely related)
- good grades
- qualifications: advanced math modules, specific modules
- letter of motivation
- language certificate (EN, unless BSc language of instruction)
- document verification: uni-assist (non-EEA)
- APS certificate (China, India, Vietnam)

Prerequisites (Data Science)

- math / **informatics** bachelor
- good grades
- sufficient qualifications:
  math & **info** modules, specific modules
- letter of motivation **& essay**
- language certificate (EN, unless BSc language of instruction)
- **possibly GRE**, **possibly APS certificate**
- document verification: uni-assist (non-EEA)

Tuition Fees for Students from Non-EU Countries

- no fees for EU/EEA students
- no fees with German bachelor degree

Tuition Fees for Students from Non-EU Countries

- no fees for EU/EEA students
- no fees with German bachelor degree
- fees of 6000,– € per semester
- merit scholarships
- waiver programs for students in need

Questions

Data Science

Other Programs

https://www.cit.tum.de/en/cit/studies/