



UNIVERSITY OF TECHNOLOGY  
IN THE EUROPEAN CAPITAL OF CULTURE  
CHEMNITZ

# Advanced and Computational Mathematics

Faculty of Mathematics

Master degree program  
accredited degree program\*



The international Master's degree program Advanced and Computational Mathematics at Chemnitz University of Technology, Germany, leads after four semesters to a Master's degree in mathematics. Students with excellent results qualify for the Ph.D. program.



## What characterizes the Master's degree program Advanced and Computational Mathematics?

Mathematics is indispensable for an efficient treatment of complex real-world problems coming from engineering, computer science, economics, finance etc. To list a few but rather influential and striking examples, we refer to household automatic control systems, Google ranking, portfolio optimization, weather forecasting or big data analysis. In these and many other areas, state-of-the-art mathematical concepts are used to model, analyze and solve the given problem.

The aim of this four-semester Master's program is to train highly qualified graduates in mathematics who are capable of successfully dealing with challenges encountered in academic and practical working fields. Based on a Bachelor's degree in mathematics, the program deepens knowledge and skills in both theoretical and applied mathematics and prepares students for professional careers in business, industry or research.

## Why study at Chemnitz University of Technology?

Chemnitz University of Technology (CUT) offers outstanding education to its students, providing them with various and attractive career perspectives. Owing to an excellent professor-to-student ratio, CUT ranks among the top five universities in Germany with respect to the quality of teaching. This high staff-to-student ratio allows more individual attention to be given to students, better enabling them to meet specific academic needs and to enjoy shorter course completion times than in most other German universities. Millions of euros have been invested in CUT in recent years, both by the government and through research projects funded by industry, making it one of the most modern research-based universities in Germany.

# Degree Structure

Advanced and Computational Mathematics			
1. semester	Levelling up course	1. semester	
	One Basic Course in Advanced Pure Mathematics	One Basic Course in Computational Mathematics	One Basic Course in Data Science
2. - 3. semester	Choose your field of specialization: <b>Advanced Pure Mathematics, Computational Mathematics or Data Science</b> and attend the corresponding courses teaching you the latest state-of-the-art		2. - 3. semester
3.sem.	1 Seminar		3.sem.
4.sem.	Master's Thesis		4.sem.
1. - 3. sem.	Language Courses German (at least level A2), Optional language courses		1. - 3. sem.

For details, please visit [www.tu-chemnitz.de/mathematik/mscphd/](http://www.tu-chemnitz.de/mathematik/mscphd/)

## Career Opportunities

Job prospects for graduates of the M.Sc. program Advanced and Computational Mathematics are excellent. Job opportunities are very versatile and cover a wide range of different branches in industry and economics, such as:

- Consulting
- Banks and insurance companies
- Software developing
- Logistics
- Scientific research
- Information technology
- Data analysis
- Telecommunications

In addition, graduates with excellent grades qualify for the Ph.D. program of the Faculty of Mathematics.

## GENERAL INFORMATION

Admission requirements: in general vocationally-qualifying university bachelor's degree in Mathematics or equivalent degree program with regard to content, English language proficiency at Level B2 according to the CEFR

Standard period of study: 4 semesters (Part-time-studies possible)

Degree: Master of Science (M.Sc.)

Start of the degree program: usually winter semester

Language of tuition: English

## FURTHER INFORMATION:

### Studying in Chemnitz

[www.study-in-chemnitz.com](http://www.study-in-chemnitz.com)

### Online application:

[www.tu-chemnitz.de/studienbewerbung](http://www.tu-chemnitz.de/studienbewerbung)

### FAQ - Frequently Asked Questions

[www.tu-chemnitz.de/studierendenservice/faq.php.en](http://www.tu-chemnitz.de/studierendenservice/faq.php.en)

### Student Service Point

Straße der Nationen 62, room A10.043

+49 371 531-12125

[admission@tu-chemnitz.de](mailto:admission@tu-chemnitz.de)

### Central Course Guidance Service

Straße der Nationen 62, room A10.046

+49 371 531-55555

[studienberatung@tu-chemnitz.de](mailto:studienberatung@tu-chemnitz.de)

### Academic Course Guidance

For an overview of all academic counsellors

[www.tu-chemnitz.de/studienberater](http://www.tu-chemnitz.de/studienberater)

### Postal address

Technische Universität Chemnitz

Studierendenservice und Zentrale Studienberatung

09107 Chemnitz

For reasons of readability, the masculine gender was mostly used. However, the terms, titles and functions equally refer to all genders.



\*[www.akkreditierungsrat.de](http://www.akkreditierungsrat.de)

