

## Information and Communication Systems Master of Science

This new English-language master's program covers a wide range of modules with the focus on future challenges in the fields of Information and Communication Systems. The program's target audience consists of international and German students holding at least a Bachelor degree in Information and Communication Technology, Electrical Engineering or Computer Science and with English language skills equivalent to the European B2 or Unicert 2 level. For students that are interested in specializing their knowledge in Information and Communication Systems the master's program offers an excellent opportunity to learn in an international environment being well prepared both for a career in academia as well in the global I&C industry. The Chemnitz University of Technology ranks among the top seven research-based universities in Germany and imposes no tuition fees.



### Information and Application

Language of instruction: English  
Duration: 2 years  
Start: October (winter term)

International students have to apply at Chemnitz University of Technology via "**uni-assist**":

⇒ <http://languages.uni-assist.de/english.html>

Links to general infos for international students about the Chemnitz University of Technology:

<http://www.tu-chemnitz.de/en/>  
<http://www.tu-chemnitz.de/international/incoming/index.php.en>

Link to infos about the Information and Communication Systems master's program:

<http://www.tu-chemnitz.de/etit/studium/stugang/english-master-ics.php>

⇒ **E-Mail Contact:** [ics-info@etit.tu-chemnitz.de](mailto:ics-info@etit.tu-chemnitz.de)

Most of the lectures of the Master's program are given by professors of the Institute of Information Technology which is part of the faculty of Electrical Engineering and Information Technology (EEIT). These professors have a sound background from industry and research:

- Prof. Thomas Bauschert - Chair for Communication Networks (formerly at Nokia Siemens Networks)
- Prof. Madhu Chandra - Chair for Microwave Engineering and Photonics (formerly at German Aerospace Center)
- Prof. Gerd Wanielik - Chair for Communications Engineering (formerly at Daimler)
- Prof. Gangolf Hirtz - Chair for Digital Signal Processing and Circuit Theory (formerly at Loewe Opta)
- Prof. Ulrich Heinkel - Chair for Circuit and System Design (formerly at Alcatel-Lucent)

### Study Program Overview

#### Compulsory Modules:

- Next Generation Internet
- Simulation and Performance Analysis
- Network Planning
- Optical Communication and Networks
- Basics of Microwaves and Photonic Systems
- Multisensorial Systems
- Mobile and Car-to-X Communication
- Mobile Localization and Navigation
- Advanced Communications Engineering
- Wireless Broadband Data Reception
- TV and Video Signal Processing
- 3D Image Processing with Embedded Systems
- Components and Architectures of Embedded Systems
- EDA-Tools

#### Elective Modules:

- Mobile Networks
- Self-Organizing Networks
- Network Security
- IP Networking Lab
- Communication Networking Lab
- Antennas and Wave Propagation
- Aerospace Remote Sensing
- Image Processing and Pattern Recognition
- Field Bus Systems
- Digital Systems
- Design of Heterogeneous Systems
- Design for Testability for Circuits and Systems
- Software Environments of Smartphone Applications
- Optimization (for non-Mathematicians)
- Presenting and Discussing Research Findings
- Management Accounting
- Communication and Leadership
- Research Project

**Master Thesis**