Information and Communication Systems

"Information and communication technologies have large impact on major industries. Besides in the classical fields of telecommunications and networking ICT will provide the base technology for several new areas like smart grids, building automation, medical engineering, remote sensing, traffic control and ambient assisted living. Thus, graduates of the ICS Master Programme are well-prepared to start a career in a wide range of businesses."

Prof. Dr. Bauschert, Chair for Communication Networks

TECHNISCHE UNIVERSITÄT CHEMNITZ

▶ What is Information and Communication Systems all about?

This English-language Master's Programme covers a wide range of modules with the focus on future challenges of the increasingly globalised field of Information and Communication Systems. Digitisation and the increasing penetration of private and occupational areas of life by Information and Communication technologies will extensively shape the information society of the future. Students at Chemnitz University of Technology are qualified to solve engineering problems and to work in research and development as well as in management positions. Focal points of the degree course are Communications Engineering, Microwave Engineering and Photonics, Circuit and System Design, Communication Networks, Digital Signal Processing and Circuit Theory.

▶ Career Opportunities

Graduates are offered excellent career opportunities both in academia and in the global Information and Communication industry. Also occupational activities in management are possible.

Graduates are well prepared for working at:

- ▶ communication equipment manufacturers
- ▶ network operators
- ▶ consulting companies
- ▶ research institutes
- ▶ automotive companies
- ▶ aerospace companies

"The Chemnitz University of Technology takes pride in announcing its new state-of-the-art, four-semester English-language, Master's degree course in Information and Communication Systems. In today's world, there is practically no engineering application that does not contain elements of Information Systems and Technology. The universal scope of this field makes it an indispensable and futuristic branch of electrical engineering. The new Master's Programme, the university, and the city of Chemnitz – a city with an illustrious technological heritage – together offer a most promising academic and cultural experience with unparalleled value-for-investment. We look forward to processing your application."

Prof. Dr. Madhu Chandra, Dean of the Department

▶ Course Content

Lectures are given by professors with a sound background from industry and research who formerly worked at Nokia, Siemens Networks, Loewe, Alcatel-Lucent, Daimler and the German Aerospace Center.

Basic Modules

- ▶ Multisensorial Systems
- ▶ Mobile and Car-to-X Communication
- ▶ Mobile Localization and Navigation
- ▶ Advanced Communications Engineering
- ▶ Basics of Microwave and Photonic Systems
- ▶ Optical Communication and Networks
- ▶ Basismodule Schaltkreis- und Systementwurf
- ▶ EDA-Tools
- ▶ Components and Architectures of Embedded Systems
- ▶ Basismodule Kommunikationsnetze
- ▶ Next Generation Internet
- ▶ Simulation and Performance Analysis of Communication Networks
- ▶ Network Simulation Lab
- ▶ Network Planning
- ▶ TV- and Video-Signal Processing
- ▶ Wireless Broadband Data Reception
- ▶ Computer Vision

Focal Modules

- ▶ Image Processing and Pattern Recognition
- ▶ Aerospace Remote Sensing
- ▶ Antennas and Wave Propagation
- ▶ Design of Heterogeneous Systems
- ▶ Design for Testability for Circuits and Systems
- ▶ Software Environments of Smartphone Applications
- ▶ IP Networking Lab
- ▶ Communication Networks Seminar
- ▶ Network Security
- ▶ Mobile Networks
- ▶ Self-Organizing Networks
- ▶ 3D Image Processing on Embedded Systems
- ▶ Digital Systems
- ▶ Numerical Simulation with MATLAB
- ▶ Optimization (for non-Mathematicians)
- ▶ Englisch in Studien- und Fachkommunikation (Niveau C1)
- ▶ Management Accounting
- ▶ Communication and Leadership
- ▶ Research Project

Module Master's Thesis
4th semester

▶ Application

German students: The application can be submitted by using the following link **www.tu-chemnitz.de/studienbewerbung.**

International students: Please use **www.uni-assist.com** for your application.

Further Information

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▶ Specialised course guidance

You may find an overview over all specialised course advisors here

www.tu-chemnitz.de/studienberater

▶ Student Advisory Service

all study programs
at a glance