The 5G Evolution

On the Way to 6G

5G aims to be the one global mobile communications standard for all applications and all user groups. 5G offers the highest performance in terms of data rate, latency, QoS and security.

What is good can always be improved. This is why 5G standardization is subject to constant evolution. New ideas, requirements, possible applications and optimization options are discussed and refined within 3GPP and adopted every 1-2 years in a new 3GPP release.

This 5G course shows the successive development of 5G towards the next generation of mobile communications (6G). The latest developments and trends are discussed. Building on the 5G start with Release 15, key evolutionary steps of the radio interface, network and services in Releases 16 and 17 as well as plans for Release 18 will be discussed and finally an outlook on 6G will be given.

Course Contents

- 5G Highlights Release 16 & 17
- 5G-Advanced (Rel. 18 & 19) Outlook
- 5G QoS concept (5QI)
- Reinforcement of the 5G radio interface New Radio
- New frequency ranges: NR beyond 52.6 GHz
- New 5G bands
- More bandwidth, higher peak rates
- Shorter latency times
- New Radio Unlicensed NR-U
- Higher Order Modulation (1024QAM)
- Multiple Transmission & Reception Points mTRP
- Dynamic Spectrum Sharing DSS
- Coverage Enhancements: more range, better coverage
- Improved handover types
- Enhanced URLLC
- Evolution of the network architecture
- 5G satellite systems for global 5G: non-terrestrial networks
- Convergence of networks: 5G + WLAN + fixed network
- Non-3GPP access (WWC, ATSSS, TNGF)
- WLAN vs. 5G
- Machine communication with 5G: Cellular IoT/Industrial IoT
- RedCap UEs
- Private 5G P5G networks (campus networks)
- P5G operating models
- Positioning: localization in 5G
- Time Sensitive Communication TSC
- 5G for autonomous driving: eV2X
- 5G BOS radio/5G public safety networks
- Future Railway Mobile Communication System FRMCS
- 5G for drone use UAS/UAV
- Evolutionary stages from 5G to 6G
- 6G outlook (IMT-2030 and beyond)
- 6G frequency planning & research

Target Group

This 5G training is aimed at anyone who is already familiar with initial 5G (3GPP Release 15) and now wants to learn about the further evolution of 5G towards 6G, new trends, features and development steps.

Prerequisites

Good 5G knowledge, according to the course 5G Mobile Communications – Architecture & Radio for Public & Private Networks , is required.

This Course in the Web

You can find the up-to-date information and options for ordering under the following link: www.experteach-training.com/go/**MO5V**

Reservation

On our Website, you can reserve a course seat for 7 days free of charge and in an non-committal manner. This can also be done by phone under +49 6074/4868-0.

Guaranteed Course Dates

To ensure reliable planning, we are continuously offering a wide range of guaranteed course dates.

Your Tailor-Made Course!

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You can optionally purchase the high-quality Premium Print Package for this course at a price of € 175 (plus VAT).

Training		Prices, excl. of V.A.T.
Classes in Germany	**4 Days**	**€ 2,595**
Online Training	**4 Days**	**€ 2,595**
Date/course venue		Course language German
08/09-11/09/26 München		02/11-05/11/26 München
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