

5G Radio Network Planning Fundamentals

This course gives an overview about radio network planning in general and shows the specifics to plan a 5G radio network.

Target group / Prerequisites

Technicians and engineers which work on network optimization tasks in mobile networks. The participants should have a good knowledge on 5G and the existing mobile network standard LTE, especially the air interface.

Course contents

Introduction

- Basics of radio network planning
- Workflow

Spectrum

- Properties of cm- and mm-waves
- Frequency Ranges and Frequency bands
- Bandwidth
- Carrier Aggregation, Supplementary Uplink

Antenna Systems

- Massive MIMO
- Characteristics of active antennas

Air Interface

- Numerology and NR Resource grid
- Logical, Transport and Physical Channels
- Synchronization and Reference Signals
- Measurements in NR: RSRP, SINR etc.

Coverage Planning

- Propagation Models
- Link Budget and its Contributors
- Cell Size Calculation

Capacity Planning

- Services in 5G
- Throughput Requirements
- Radio and Transport Capacity

Further Planning Aspects

- PCI Planning
- PRACH Planning
- Neighbour Relation Planning

Duration:

2 days

Course ID:

NW1265

Prerequisites:

Good knowledge of 5G and LTE, good knowledge of network planning

- Transmit Power

Certification

Certificates are given to all participants at the end of the course about the successful completion.

Course Registration:

Please contact us via

- phone: +49 89 1894354-405
- email: training@tfk-technologies.de or
- via our website <https://skilleap.com/courses>

You will receive a confirmation of your registration. We can also advise you concerning the best combination of course contents.

For clients with special requirements the optimal training concept can be customized. Modules from our training portfolio can be combined to meet your company-specific needs.