



5G Spectrum

54 Min.

LEARNING OBJECTIVE:

Module is focused on the development and applications of 5G NR and getting prepared for the future. State of 5G Spectrum, 5G Standardization, 5G System Requirements, 5G NR Operating Frequency Bands, Channel Bandwidths, Spectrum Sharing and Flexible Spectrum Use and Bandwidth Part Configuration.

COURSE OBJECTIVE:

This course is made for Telecom professionals to go into very detail to understand 5G spectrum and its utilization and bandwidth and help professionals understand about 5G bandwidth calculation and utilization globally. This contains 5G spectrum, standardization, 5G System requirements/5G NR Operating and its frequency bands. 5G NR is the first ever radio system that is designed to support any spectrum.

WHO SHOULD ATTEND:

The participant should have familiarity with telecommunications and general engineering terminology. Understanding of LTE cellular systems would be beneficial.

TARGET AUDIENCE :

Network Engineers, Non-Technical/Technical Manager Planning and Optimization Experts, Technical Consultants and others

INSTRUCTIONAL METHODS:

Lectures in Classroom, on Power-point slides, discussion, Questions & Answers. All participants will also receive comprehensive course materials.

COURSE OUTLINE :

1. 5G Spectrum

- 1.1 Different Spectrum for different use cases**
- 1.2 Main 5G spectrum options in different markets globally**
- 1.3 Spectrum Availability**

2. 5G Standardization

- 2.1 5G Research and Development**
- 2.1 Next Generation Wireless Technologies**
- 2.2 Timeline for 5G standards and roll out**
- 2.3 5G chipsets and device timeline**





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3. Future wireless challenges

- 3.1 Heterogeneous use cases diverse requirements
- 3.2 From IMT Advanced to IMT 2020
- 3.3 3GPP defined requirements
- 3.4 LTE Gap to 5G requirements

4. 5G NR Operating Frequency bands

- 4.1 Definition of Frequency Ranges
- 4.2 5G NR Operating Bands

5. 5G NR Channel bandwidth

- 5.1 Channel bandwidth and transmission bandwidth configuration
- 5.2 5G NR Operating Bands
- 5.3 Supported NR channel bandwidths
- 5.4 Supported channel bandwidth for each operating band
- 5.5 NR-ARFCN

6. Spectrum sharing and flexible spectrum use

- 6.1 Spectrum sharing and flexible spectrum use

7. Bandwidth Part Configuration

- 7.1 Definition
- 7.2 Motivation
- 7.3 Use cases
- 7.4 Configuration
- 7.5 Active BWP
- 7.6 Active BWP Latency

Evaluation and feedback of the participants

Maximum number of participants: 15

Duration: 54 Min.

