5G for Everyone

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5G constitutes a genuine paradigm shift in the global telecommunications infrastructure. This course is designed to give a functional understanding of 5G for non-technical people.

It enables you to have insightful discussions with customers, engineers and managers regarding the big differences between 5G and other wireless technologies, and how 5G fits into the world of telecommunications.

PREREQUISITES

None.

A Brief History of Telecom

- Why Is it Called the Fifth Generation?
- What Can We Learn from Previous Generations
- What Is the Timeline from 1G to 6G?

Differences between 5G and 4G

- Bit rates
- Energy usage / Environmental Impact
- Frequency usage
- Latency (delay)

5G Radio (New Radio)

- Differences and Similarities Compared to Previous Generations
- What is MIMO?
- Is 5G Radiation Dangerous?

Standard IT in the 5G Networks

- Adoption of Standard IT Protocols (IP, HTTP etc.)
- Stand-Alone (SA) Core
- Virtualization and Cloud in Telecom and Network Slicing
- Networking in Telecom
- Edge Computing in Telecom

Typical 5G Use Cases

- The Three Main Use Case Groups of the Standard
- Industry and Factories
- Massive Internet-of-Things
- Automotive and Health Applications
- Private (Dedicated) 5G Networks

The 5G Ecosystem

- Standardization bodies
- Vendors and operators
- Cooperation organizations
- 5G Around the World