Course ID	Course Title
5G-NET-TECH	**5G Radio Network Technology Training**
Course Duration	
3 days	

Aimed At

5G Radio Network Technology Training is aimed at technical audiences who have a good understanding of LTE/LTE-A and who want to learn more about the 5G network technology.

Prerequisites

Those taking 5G Radio Network Technology Training should have a good knowledge of LTE/LTE-A as taught in an Eogogics course such as LTE / LTE-A Deep Dive: RAN and Core (LTE-DIVE, 4 days).

Related Courses

- *5G New Radio Training* (5G-NR, 2-3 days)
- *5G Wireless Training: Layers 1, 2, 3* (5G-TF1, 4-5 days)
- *5G RAN Training: Technology & Planning* (5GTUTE, 5 days)
- *5G Wireless Technology/Applications* (5GTA, 5 days)
- *5G Wireless Priority Services Training* (5G-PRIOR1, 3-5 days)

Course in a Nutshell

5G Radio Network Technology Training undertakes an in-depth study of the 5G technology including the 5G New Radio NR concept, Physical Layer, Signaling Layer, and 5G Mobility.

Customize It!

We can tailor the included topics, tech level, and duration of this course to your team's technical requirements.

Outline

- 5G Radio Network Technology Training Part 1: 5G Wireless Basics
    - o What is 5G
    - o Roadmap to 5G technology
    - o Why 5G
    - o The 5G E2E ecosystem
    - o 3GPP standards for NR
    - o 5G architecture
    - o How does 5G differs from 4G

- o 5G RAN requirements: Bandwidth, power, spectral efficiency, new technology adaptation, latency, signaling load, capacity, coverage, interference, mobility
- o 5G Core requirements: Network topology, cloud architectures, big data analytics
- o 5G service platforms
- 5G Radio Network Technology Training Part 2: 5G Physical Layer
  - o Physical layer basics
  - o Physical layer NR key principles
  - o OFDM introduction
  - o Physical layer time domain structure
  - o Flexible numerology: Reasons behind it
  - o Interference mitigation techniques
  - o Massive MIMO and beam forming
  - o Grid of beams and beam mobility
- 5G Radio Network Technology Training Part 3: 5G Signaling Layer
  - o MAC, RLC, PDCP, layers
  - o Scheduling, link adaptation, Fast HARQ, ARQ and PDCP split
  - o L3 signaling basics (RRC, NAS)
  - o Call flows
  - o New Radio NR cell concept
  - o A brief introduction to 5G QoS
- 5G Radio Network Technology Training Part 4: 5G Mobility
  - o 3GPP standards towards 5G: Features and technical proposals
  - o Mobility management
  - o L3 mobility for Idle
  - o L3 mobility for Dormant
  - o L3 mobility for Connected mode
  - o 5G multi-connectivity
  - o 5G interworking with LTE
- 5G Radio Network Technology Training: Recap and Discussion

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