5G Foundations Training

BILGINÇ
IT Academy
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Duration: **4 Day**

Exclusive - Exclusive – Learn the history of mobile communication and delve into 5G, its related technologies, and associated applications.

This course is geared towards trainees with a broad range of expertise, from administrative and call center personnel to technical staff, as well as wireless and network engineers. We begin by defining what 5G is and comparing it with previous generations of mobile communications. Some of the most important capabilities of the technology are showcased including specific application areas and scenarios.

The course is interspersed with six case studies that describe real-world applications of 5G infrastructure in some specific areas to help demonstrate the technology.

In addition, several exercises and thought experiments will be performed in the course with the help of the instructor and a workbook, to engage trainees in discussion and logical reasoning and further help them understand 5G, related technologies, as well as associated applications.

Is This The Right Course?

An understanding of general wireless principles and a literacy and awareness of basic modern mobility concepts.

Must have a subscription to Skillsoft Percipio in order to access the following:

- **Recommended Course: 5G Technical Primer Bootcamp**

  This Bootcamp is aimed at entry to mid-level technical staff, wireless engineers, telecom professionals, networking professionals, and technical personnel that have some experience with networking, wireless communications networks, as well as some experience with 3G or 4G/LTE networks.
  Prior to attending this Bootcamp, you should have some working knowledge of telecommunications standards, wireless communications, radio communications, and/or networking

Who Should Attend?

Wireless call center personnel and operations staff, curious wireless nerds, apprentice wireless engineers and legacy electrical engineers, current wireless personnel looking to upskill.

Prerequisites

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What You Will Learn

- 5G Definitions, Challenges, and Solutioning
- 5G Application Types
- 5G EN-DC architecture
- 5G Stand-alone architecture
- Beamforming, mm-wave, massive-mimo
- 5G Access technology, O-RAN, and v-RAN
- New Radio technology, numerology
- Narrowband IoT support technology
- IMS in the 5G Network
- Network Slicing
- 5G call trace analysis
- Securing 5G Solutions
- Machine-type 5G Communications

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Training Outline

Day 1: 5G Foundations

- 5G Definitions, Solutions and Challenges
- 5G vs 4G vs 3G: LTE vs New Radio
- 5G Application Scenarios: How is 5G being used?
- 5G Case Study #1 - IoT and Smart Cities
- All About Operator Bands
- 5G Deployment Strategies

Day 2: 5G Protocol Stacks and Services

- 5G core network architecture
- The 5G Stack
- 5G Case Study #2 - Smart grids and utilities
- Significant N interfaces
- 5G cloud-based services
- 5G protocols and operations

Day 3: 5G infrastructure and Network Slicing

- All about the RAN
- 5G Infrastructure
- 5G Case Study #3 - Transportation
- Introduction to 5G network slicing
- 5G Case Study #4 - Smart supply chains and logistics
- Edge Computing and 5G

Day 4: Managing 5G Solutions

- Entities involved in managing 5G
- Dealing with Governments and Regulators
- 5G Case Study #5 - Smart and Digital Agriculture
- "Major Mobility Management Concepts"
- 5G Case Study #6 - Healthcare
- "Monitoring 5G Solutions "