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## [5G systems: technologies, implementation, and applications](#)

Registration

Start date of registration

02 Jun 2023

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End date of registration

02 Nov 2023

Event dates

Start date

06 Nov 2023

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End date

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Location

Global or multi-regional

Training topics

Training topics

Wireless and fixed broadband

Training type

Training modality

Online instructor led

Languages

Languages

English

Event organizer

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## Event organizer

Digital Bridge Institute

## Tutors

- Chukwuemeka Ejiofor
- Israel Baiye
- Chinwuba Igbokwe
- Mahmoud Abdullahi
- Umar Sani Abdullahi

## Coordinators

- Emmanuel NIYIKORA
- Paulinus Okechukwu UGWOKÉ

## Payment methods

- Bank transfer
- Credit card

## Event email contact

## Event mail contact

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Price

\$300.00

## Description

4G has been a driver to transform the world into a single global telecommunication industry with lots of improvements in connectivity, security and data management. As the demand got higher for speed, ultralow latency and massive number of device connections, a new generation technology was required to meet all the demands. The key features and importance of 5G New Radio (NR) system is set in International Mobile Telecommunication-2020 (IMT-2020) Standards, recommended by International Telecommunication Union-Radiocommunication Sector (ITU-R) in 2015. 5G systems are deployed in a variety of spectrum bands: below 1 GHz, between 1 and 6 GHz, and beyond 6GHz in the millimeter wave (mmWave) frequency range. 5G New Radio (NR) is the first mobile technology generation to make use of the millimeter spectrum. One important characteristic of mmWave spectrum is its potential to support large bandwidths and high data rates that are ideal for increasing the capacity of wireless networks. mmWave can provide new and enhanced experiences with multi-Gbps (Giga bits per second) data rates, low latency and virtually unlimited capacity. 5G networks in mmWave are mainly targeted for urban environments to provide high data rate services. This course, firstly presents the standardization landscapes as defined by 3GPP, focusing on the sequence of Releases of the standards in migration towards 5G. From the ongoing Releases, Phase One, Release-15, focused on the 5G New Radio (5G NR) requirements to address the more urgent subset of the commercial needs. Therefore, the 5G NR design should be forward compatible in order to guarantee that additional features can be added transparently in later Releases. The novelty of 5G is the integration of multiple networks serving diverse sectors, domains and applications, such as multimedia, virtual reality (VR) and augmented reality (AR), machine to machine (M2M) and Internet-of Things (IoT), automotive applications, smart city, etc. The diversity of the 5G applications and their related service requirements in terms of data rate, latency, reliability, and other parameters leads to the necessity for operators to provide a diverse set of 5G networks. Therefore, this course discusses the technologies, implementation and applications of 5G systems.

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## Registration information

[Document on registration information \(English\)](#)

Unless specified otherwise, all ITU Academy training courses are open to all interested professionals, irrespective of their race, ethnicity, age, gender, religion, economic status and other diverse backgrounds. We strongly encourage registrations from female participants, and participants from developing countries. This includes least developed countries, small island developing states and landlocked developing countries.

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