

Registration information

5G systems: technologies, implementation, and applications

Organized by:

Training details

Modality: Online instructor led

Dates: 06 Nov 2023 - 17 Nov 2023

Training fees: \$300.00

Language: English

Application deadline: 02 Nov 2023

Payment methods: bank_transfer, credit_card, Bank transfer, Credit card

Training code: 23OI100235MUL-E

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Training 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.

For more information about the training objectives, target population, entry requirements, methodology, evaluation and content, consult the page [here](#).

How to apply

In order to register for the training, applicants should:

1. Create an ITU Academy account [here](#)
2. Apply for the course [here](#)
3. The selection of participants for the course will be made by the course coordinators, based on the course's entry requirements, selection criteria and available number of seats. If selected, you will receive a notification by email.

How to pay for the training

This course is organized by , an ITU Academy Training Centre, which will collect the training fees directly.

You will find details about the payment process of this Centre at the following [link](#) or alternatively in your ITU Academy account under [My courses](#).

Kindly note that payment must be made by 04 Sep 2023

Group registration and payment

Registration and payment for multiple people from an organization is possible through institutional contacts.

To become an institutional contact:

1. Go to your profile page by clicking on the “My account” button in the user menu and click on the “Apply to be an Institutional Contact” button
2. Fill in the required information and click “continue”, a request will be created.
3. An ITU Academy manager will manually review this request and accept or deny it accordingly.
4. If accepted, you will find a new menu tab “Institutional Contact” appearing in the top bar. You can now request multiple seats in a course and assign them to people from your group. Kindly note, each individual must create an ITU Academy account.



The [ITU Academy](#) is the International Telecommunication Union leading platform for capacity development initiatives.

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