

Registration information

Pathways to 5G: evolution of mobile networks from 3G to 5G Non-Standalone

Organized by:

Training details

Modality: Online instructor led

Dates: 04 Dec 2023 - 22 Dec 2023

Training fees: \$300.00

Language: English

Application deadline: 01 Dec 2023

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

Training code: 23OI100238MUL-E

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Training description

In 5G non-standalone, emphasis is on a gradual roadmap from 4G to 5G mobile network. This course focuses on path migration of 2G, 3G to 5G mobile networks, considering timelines and technology used in each generation of mobile communication. The full description of the mobile networks as listed on the course title may not be covered in detail. The course starts with the background of RF mobile networks, then it gives insight about the fundamentals of mobile networks, the evolution from 1G which was Analog in nature, to the global system for mobile communication (2G) in digital format and employing circuit switched (voice) and the variants (GPRS) for limited data and to 3G when the packet switched network was utilized. This developments hereafter, paved way for video calling, live streaming, mobile internet access, IPTV, etc. The course presents the standardization landscapes as defined by 3GPP, focusing on the sequence of Releases of the standards in migration towards 5G. The sessions of the course also describe the network architecture of each generation of mobile communication. Also covered in this course are the 3GPP cellular telecommunications technologies including radio-access, core network and service capabilities which provide a complete system description for mobile telecommunication. Consequently, with the emergence of Long-Term Evolution (LTE) Network, the core network, Evolved Packet Core (EPC) is an all-IP core network and is fully Packet Switched (PS). Services like voice, which are traditionally Circuit Switched (CS), will be handled using the IP Multimedia Subsystem (IMS) network. The LTE-Advanced (LTE-A) was introduced as enablers to enhance the performance of the network. As a result, the theoretical data

throughput offered by the LTE-A is up to 3Gbps (Giga bits per second) data rate â a significant improvement over LTE. In LTE-A Pro, further enhancement was carried out, using full dimension MIMO (FD-MIMO) and Vertical beamforming to target LTE enhancements towards Machine-Type-Communications. This course is pace-enabled with interactive sessions. As we trace the Path of migration towards 5G, we shall demonstrate by diagrams the architecture of each of the mobile networks and use the Samsung case study as one methodology to explain real-life scenario.

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 14 Aug 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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