



ITU Centres of Excellence Network for Asia-Pacific Region

Advanced Level Telecom Training Centre

Online Training Course on

“Ubiquitous Broadband for Future Generations”

Ghaziabad (Near Delhi), India

27 September - 8 October 2021

TRAINING COURSE OUTLINE

COURSE DESCRIPTION

Title	Online training course on “Ubiquitous Broadband for Future Generations”
Objectives	<p>This online training course aims to equip participants with an understanding of:</p> <ul style="list-style-type: none">• Future generation broadband technologies i.e FTTX, X-PON.• Transport network requirement for ubiquitous broadband.• Latest generation 3GPP and Non-3GPP technology developments.• Standards and improvement for UFBB.• Concepts and technological aspects of future mobile broadband technologies e.g. LTE advanced ,5G, 5G-NR.• Next Generation Network (NGN) Wireline Architecture.
Dates	27 September - 8 October 2021
Duration	02 Weeks
Registration deadline	26 September 2021
Training fees	USD 100
Course code	21OI26536ASP-E

Upon completion of this training, participants will be able to understand:

- Concept of the ubiquity, sustainability of the broadband under ITU vision 2025 and UN's SDG Goal 2030.
- The different perturbation with the current ecosystem of broadband services
- Planning and managing broadband technologies to cater needs of future generations broadband Core/Aggregation/Access network.
- The technological development of 3GPP and non 3GPP and latest development in the field.
- Roles of 5G, 5G-NR and other technologies to cater our future generations.

TARGET POPULATION

This training is targeted at policymakers, regulators, telecom operators including ICT professionals, academia members and individuals who are interested in understanding the topic of future generation broadband technologies.

ENTRY REQUIREMENTS

Any Engineering Graduate/Diploma in the area of Electronics, IT / Telecommunication and Computer science and Electrical are encouraged to join this course.

TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	POSITION	CONTACT DETAILS
Mr. Mohan Singh	General Manager, ALTTC, BSNL, Ghaziabad, India	mohanbagrana2872@bsnl.co.in +91 9968658200
Mr A K Jha	Dy. General Manager, ALTTC, BSNL,Ghaziabad, India	akjha@bsnl.co.in +919412739258
Mr. Ashok Kumar Sharma	Dy. General Manager ALTTC, BSNL,Ghaziabad, India	ashok1963sharma@gmail.com +91 9412220075
Mr. Anand Kumar	Assistant General Manager(BB) ALTTC, BSNL,Ghaziabad, India	anandkumarbsnl21@gmail.com +91 9412739248
Mr. Naresh Singh	Assistant General Manager(BB) ALTTC, BSNL,Ghaziabad, India	Nareshsingh17@gmail.com +91 9412000939
Mr. N P S Chauhan	Asst. Director(BB) ALTTC, BSNL,Ghaziabad, India	npsinghhauhan@gmail.com +91 9418044500
Mr. Alock Tyagi	Asst. Director(BB) ALTTC, BSNL,Ghaziabad, India	alocknoc@bsnl.co.in +91 9412000928
Mr. Abhay Gupta	Asst. General Manager(Mobile) ALTTC, BSNL,Ghaziabad, India	abhaybpl@gmail.com +91 9412739319
Mr. Nikunj Goel	Assistant General Manager(Tx.) ALTTC, BSNL,Ghaziabad, India	nikunjgoelin@yahoo.com +91 9412739309
Mr. Sandeep Singh	Asst. Director(Mobile) ALTTC, BSNL,Ghaziabad, India	sandeepalttc@bsnl.co.in +91 9463502525

TRAINING SCHEDULE AND CONTENTS / AGENDA

Week	Module Title	Topics
1	Module 1: Broadband Technologies for future	<ul style="list-style-type: none"> • Concept of Ubiquity, Sustainability, ITU Vision 2025. • Perturbations associated with current eco-system. Preparedness for Future Generations: MNG-PAN, NG-PON, NG-PON2, NFV (Network Function Virtualization), SDN (Software Defined Networking). • Transport Network to support for ubiquitous broadband • 3GPP and Non-3GPP technological development. • 4G to 5G RAN transition ,5G New Radio (5G NR), and Key technical enablers for 5G.
		Discussion / Forum
		Chat Session-1
		Quiz 1
2	Module 2: Future Broadband Network and Application	<ul style="list-style-type: none"> • Next Generation WiFi,(WiFi-6) • 5G RAN practical implementations. • Regulatory aspects for future Broadband. • Future telecom mobile voice (VoLTE, VoNR) Future mobile OTT services. • 5G applications
		Discussion / Forum
		Chat Session-2
		Quiz 2

METHODOLOGY (Didactic approach)

Course materials: Each week one module will be discussed and the relevant course material will be made available on the website.

Online Discussion Forums: Participants are expected to participate actively in discussion forums on selected topics throughout the week.

Chat sessions: Chat sessions will be conducted in real time every week where discussions would be held with the instructor (s) on a particular topic. Participants are encouraged to join the discussion and exchange points of view.

Quizzes: Two mandatory quizzes will be held during the course. Course evaluation and feedback would be done at the end of the course and is a part of the mandatory activity.

EVALUATION AND GRADING

The assessment of the participants shall be based on the time spent on the training and the following parameters:

Quiz # 1	10%
Quiz # 2	10%
Final Exam	50%
2 Chat Sessions (10% per session)(each Thursday)	20%
2 Discussion Forum (5% per forum)	10%
Total Evaluation:	100%

The minimum passing requirement for certificate is 70%

TRAINING COURSE COORDINATION

<p>Institute Head: Mr. Arun Kumar Sharma Chief General Manager ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p> <p>cgm_alttc@bsnl.co.in (Email) +91 120 2755121 (Works) +91 120 2710494 (Works) +91 120 2756985 (Fax) +91 9414001101 (Mobile)</p> <p>Institute Coordinator: Mr. Mohan Singh General Manager (Tech) ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p> <p>mohanbagrana2872@bsnl.co.in (Email) +91 120 2704628 (Works) +91 9416010053 (Mobile)</p>	<p>Training coordinators: Mr. Ashok Kumar Sharma DGM (Broadband & CFA) ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p> <p>ashok1963sharma@gmail.com +91 9412220075 (Mobile)</p> <p>Mr. Anand Kumar AGM (Broadband) ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p> <p>anandkumarbsnl21@gmail.com +91 9412739248 (Mobile)</p>	<p>ITU coordinator: Mr. Sean Doral Program Officer, ITU Regional Office for Asia- Pacific 5th Floor, Thailand Post Training Centre, 111 Moo3 Chaengwattana Road,Laksi Bangkok 10210,Thailand</p> <p>sean.doral@itu.int (Email) +41 2273 05438 (Works) +66 257 535 07 (Fax)</p>
---	--	--

REGISTRATION AND PAYMENT

ITU Academy portal account

Registration and payment should be made online at the ITU Academy portal.

To be able to register for the course you **MUST** first create an account in the ITU Academy portal at the following address: <https://academy.itu.int/user/register>

Training course registration

When you have an existing account or created a new account, you can register for the course online at the following link: <https://academy.itu.int/training-courses/full-catalogue/ubiquitous-broadband-future-generations>.

You can also register by finding your desired course in our training catalogue <https://academy.itu.int/training-courses/full-catalogue>

Payment

1. On-line payment

A training fee of USD 100 per participant is applied for this training. Payment should be made via the online system using the link mentioned above for training registration at <https://academy.itu.int/training-courses/full-catalogue/ubiquitous-broadband-future-generations>.

2. Payment by bank transfer

Where it is not possible to make payment via the online system, select the option for offline payment to generate an invoice using the same link as above. Download the invoice to make a bank transfer to the ITU bank account shown below. Then send the proof of payment/copy of bank transfer slip and the invoice copy to Hcbmail@itu.int and copy the course coordinator. **All bank transaction fees must be borne by the payer.**

Failure to submit the above documents may result in the applicant not being registered for the training.

3. Group payment

Should you wish to pay for more than one participant using bank transfer and need one invoice for all of them, create an account as **Institutional Contact**. **Institutional Contacts** are users that represent an organization. Any student can request to be an institutional contact or to belong to any existing organization.

To do this, head to your profile page by clicking on the **“My account”** button in the user menu. At the bottom of this page you should see two buttons:

- a. If you want to **become an institutional contact**, click on the **“Apply to be an Institutional Contact”** button. This will redirect you to a small form that will ask for the organization name. After you fill the name of the organization you want to represent, click on **“continue”** and a request will be created. An ITU Academy manager will manually review this request and accept or deny it accordingly.
- b. If you want to **belong to an existing organization**, click on the **“Request to belong to an Institutional Contact”** button. This will redirect you to a small form that will ask you to select the organization you want to join from an organization list. After you select the correct organization, click on **“continue”**, a request will then be created. The Institutional Contact that represents that organization will manually accept or deny your request to join the organization.

ITU BANK ACCOUNT DETAILS:

Name and Address of Bank:	UBS Switzerland AG Case postale 2600 CH 1211 Geneva 2 Switzerland
Beneficiary:	Union Internationale des Télécommunications
Account number:	240-C8108252.2 (USD)
Swift:	UBSWCHZH80A
IBAN	CH54 0024 0240 C810 8252 2
Amount:	USD 100
Payment Reference:	CoE-ASP-21OI26536ASP-E-P.40593.1.04

4. Other method of payment

If due to national regulations, there are restrictions that do not allow for payment to be made using options 1 & 2 above, please contact the ITU coordinator for further assistance.