



## Training course outline

### ITU and Advanced Level Telecom Training Centre

Title	Converged Core Network: Route to Un-Explored Opportunities
Modality	Online Instructor Led
Dates	26 September – 7 October 2022
Duration	2 Weeks
Registration deadline	26 September 2022
Training fees	100 USD per participant
Description	Converged Core Network: Route to Un-Explored Opportunities aims to equip participants with an understanding of Concept of convergence and Converge network Architecture, Core network technologies, Core Access Technologies, Core Data Technologies, Evolution of Mobile Core Network, Core Features of 5G, Core features of LTE and Concepts and Security aspects of mobile Broadband technologies
Code	22OI27827ASP-E

#### 1.LEARNING OBJECTIVES

This online training course aims to equip participants with an understanding of:

- Concept of convergence and Converge network Architecture.
- Core network technologies: SDN, SD-WAN, NFV and self resilient Network.
- Core Access Technologies : NGPON-1 and NGPON-2, Broadband agrégation network :MNG-PAN.
- Core Data Technologies : Block-Chain, Used cases, WIFI 6.0.
- Evolution of Mobile Core Network : EPC, 5GC,
- Core features of 5G : Network slicing, CUPS etc.
- Core features of LTE :EPC.
- Concepts and Security aspects of mobile Broadband technologies e.g. 4G(LTE), 5G(R16), Application of 5G and use cases.



## 2. LEARNING OUTCOMES

- Convergence concept, key technologies and application areas.
- Core network technologies for data i.e :NFV, SDN, SD-WAN etc.
- Converged Network Architecture including 4G, 5G etc.
- Data core technologies : Block chain,
- Advanced transport technologies i.e :MNG-Pan .
- Converged Access Technologies i.e:NGPON-1 and NGPON-2, WIFI6.0 etc.
- Use cases defined by ITU and 3GPP.

## 3.TARGET POPULATION

This training is primarily targeted at executives, managers, engineers and technical staff from regulators, policy makers, telecom operators, and academia and government organizations.

## 4.ENTRY REQUIREMENTS

Any Graduate/Diploma in Electronics, IT / Telecommunication, Electrical, Computer science and Electrical may apply for this course.

No prior knowledge or qualification in converged network is required; however it is important for participants to be working for a regulator, or in the ICT/Telecoms sector as a provider or consultant. Students in the Engineering or ICT related courses could also be considered.

## 5.TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	POSITION	CONTACT DETAILS
Mr. Arun Kumar Sharma	Chief General Manager, ALTTC, BSNL, Ghaziabad, India	<a href="mailto:cgm_alttc@bsnl.co.in">cgm_alttc@bsnl.co.in</a> <a href="mailto:cgmalttc@gmail.com">cgmalttc@gmail.com</a> + 91 9414001101
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## 6. TRAINING COURSE CONTENTS

### Module 1: Converged Core Network and Technologies

- Concept of convergence and Converge network Architecture
- Core network technologies : SDN, SD-WAN, NFV and self reliant Network.
- Core Access Technologies : NGPON-1 and NGPON-2, Broadband aggregation network :MNG-PAN.
- Core Data Technologies :Block-Chain, Used cases, WIFI 6.0.

### Module 2: : Converged Wireless Core Network, Technologies and Unified Standards

- Evolution of Mobile Core Network : EPC, 5GC,
- Core Features of 5G : Network slicing, CUPS etc.
- Core features of LTE :EPC.
- Concepts and Security aspects of mobile Broadband technologies e.g. 4G(LTE), 5G(R16), Application of 5G and use cases.
- 5 G use cases: AR/VR/XR/FWA/V2X,
- Applications and Used cases

## 7. TRAINING COURSE SCHEDULE

Week / Session	Topic	Exercises and interactions
Week 1	<b>Module 1: Converged Core Network and Technologies</b>	<ul style="list-style-type: none"><li>• Online modules</li><li>• Discussion / Forum</li><li>• Chat Session</li><li>• Quiz 1</li></ul>
Week 2	<b>Module 2: : Converged Wireless Core Network, Technologies and Unified Standards</b>	<ul style="list-style-type: none"><li>• Online modules</li><li>• Discussion / Forum</li><li>• Chat Session</li><li>• Quiz 2</li></ul>



## 8.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.

## 9.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%
<b>Total Evaluation:</b>	<b>100%</b>

## 10.TRAINING COURSE COORDINATION

<p><b>Institute Head:</b> <b>Mr. Arun Kumar Sharma</b> Chief General Manager ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p> <p><a href="mailto:cgm_alttc@bsnl.co.in">cgm_alttc@bsnl.co.in</a> <a href="mailto:cgmalttc@gmail.com">cgmalttc@gmail.com</a> +91 120 2755121 (Works)</p> <p><b>Institute Coordinator:</b> <b>Mr. Mohan Singh</b> General Manager ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p>	<p><b>Training Coordinators:</b> <b>Ms. Suresh Devi</b> DGM (CFA &amp; BB) ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p> <p><a href="mailto:sureshdevi7009@gmail.com">sureshdevi7009@gmail.com</a> (Email) +91 9412739242 (Mobile)</p> <p><b>Mr. Anand Kumar</b> AGM (BB) ALTTC, Raj Nagar, Ghaziabad, UP, INDIA -201002</p>	<p><b>ITU Coordinator:</b> <b>Mr. Sean S. Doral</b> Program Officer-ITU, ITU Regional Office for Asia- Pacific 5th Floor, Thailand Post Training Centre, 111 Moo3 Chaengwattana Road, Laksi Bangkok 10210,Thailand <a href="mailto:Sean.doral@itu.int">Sean.doral@itu.int</a> (Email) +66 806650213 (Works) +66 257 535 07 (Fax)</p>
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