

## ITU-GSMA Joint Online Capacity Building Course on

### 5G — The Path to the Next Generation

12<sup>th</sup> – 14<sup>th</sup> July 2021 (14:00 PM to 17:00 PM CEST)

#### COURSE OUTLINE

#### COURSE DESCRIPTION

|                                |   |
|--------------------------------|---|
| Title                          | Training Course on 5G — The Path to the Next Generation   |
| Method of delivery             | Online  |
| Course Overview and Objectives | <p>Course Overview</p> <p>The mobile industry is preparing to embark on the transition to fifth generation (5G) technology, which will build on the achievements of 4G while also creating new opportunities for innovation. 5G will usher in a new era that will see connectivity become increasingly fluid and flexible.</p> <p>This course covers the key aspects of 5G technology and examines the role governments and regulators can play in helping unlock the benefits of future 5G services for their citizens.</p> <p>Course Objectives</p> <ul style="list-style-type: none"><li>• Learn about the underlying technologies and concepts associated with 5G.</li><li>• Discover the key differences between 5G and previous generations of mobile technology.</li><li>• Understand how governments and regulators can help accelerate the development of 5G technology and services in their countries.</li></ul> |
| Dates                          | 12-14 July 2021 (14:00 PM to 17:00 PM CEST)   |
| Duration                       | 3 Days (3 hours/day)  |
| Registration deadline          | 30 June 2021  |
| Training fees                  | Free of Charge  |
| Course code                    | 21OI26642MUL-E  |

#### LEARNING OUTCOMES

At the end of the course, participants will be able to:

- Learn about the underlying technologies and concepts associated with 5G.
- Discover the key differences between 5G and previous generations of mobile technology.

- Understand how governments and regulators can help accelerate the development of 5G technology and services in their countries.

## TARGET POPULATION

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This course is open to:

- Regulators
- Policymakers
- Representatives from academia and international organisations working on regulatory or policy issues

The course is only open to those involved in policy and regulation from ICTs ministries and regulators of ITU members.

The course is accredited by the United Kingdom Telecommunications Academy, an internationally recognised centre of excellence in the provision of academic, technical and vocational education in Telecommunications

## TUTORS/INSTRUCTORS

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| NAME OF TUTOR(S)/INSTRUCTOR(S)   | CONTACT DETAILS   |
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| <p><b>Dr. Jyrki Penttinen</b> is Senior Technology Manager at GSMA, North America office.</p> <p>Dr. Penttinen has worked on mobile telecommunications in Finland, Spain, Mexico, and the USA. His past employers include Telia Sonera, Nokia, and G+D Mobile Security Americas. He is experienced in research and operational activities such as planning, optimization, measurements, system architectures, and services. Since 2014, he focused on security solutions and developing industry trends. At present, he assists operator members with the adoption, design, development, and deployment of GSMA specifications and programmes. Dr. Penttinen has also authored various books on 5G and other telecommunication technologies.</p>   | <p><a href="mailto:jpenttinen@gsma.com">jpenttinen@gsma.com</a></p> |
| <p><b>Barbara Pareglio</b> has over 20 years of experience in the mobile industry. She has been part of the GSMA Internet of Things Programme since 2014, working on several aspects of the IoT such as the development of the Mobile IoT Technologies (LTE-M, NB-IoT), GSMA IoT Security Guidelines, GSMA Drone Interest Group and looking at a variety of emerging technologies, like machine learning/AI and edge computing, for helping the mobile industry to create trusted solutions for the IoT. Before joining the GSMA Barbara worked in R&amp;D in several areas of telecommunications, including Intelligent Networks, IMS, Service Enabling and M2M/IoT. She also participate in and actively contributed to several standards.</p> <p>The GSMA Internet of Things Programme help operators to fully realise the opportunity in the IoT, operators must deliver secure IoT networks as well as scalable value added data services for the world's</p> | <p><a href="mailto:BPareglio@gsma.com">BPareglio@gsma.com</a></p>   |

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| industry and machines beyond connectivity. This is to be achieved by industry collaboration, appropriate regulation, optimising networks as well as developing key enablers to support the growth of IoT. |  |
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## EVALUATION

- I. Post Test.
- II. Case Study.
- III. Quizzes.

## TRAINING SCHEDULE AND CONTENTS / AGENDA

| Day 1: Setting the scene:<br>Introducing the 5G era<br>[3 hours] | Time; Start time | Topics/Activities  |
|--|------------------|--|
| 12/07/2021   | 14:00 - 17:00    | Session 1: Development of 5G era <ul style="list-style-type: none"> <li>Welcome, introductions</li> <li>Introducing the 5G era</li> <li>The Development of Mobile Technology</li> <li>Q&amp;A</li> </ul> |
|  |                  | <b>BREAK</b>   |
|  |                  | Session2: Use Cases <ul style="list-style-type: none"> <li>Initial Use Cases: eMBB, FWA, IoT, URLLS</li> <li>Group Exercise</li> <li>Q&amp;A</li> </ul>  |
| Day 2: Business models and<br>strategies [3 hours]               | Time; Start time | Topics/Activities  |
| 13/07/2021   | 14:00 - 17:00    | Session 3: Status, business models <ul style="list-style-type: none"> <li>Global 5G Spectrum and deployment status, forecasts</li> <li>Business models</li> <li>Q&amp;A</li> </ul>                       |
|  |                  | <b>BREAK</b>   |
|  |                  | Session 4: Deployment options and enablers <ul style="list-style-type: none"> <li>Deployment strategies</li> <li>Group Exercise</li> <li>Key technical enablers</li> <li>Q&amp;A</li> </ul>              |
| Day 3: Spectrum, transition<br>strategies [3 hours]              | Time; Start time | Topics/Activities  |
| 13/07/2021   | 14:00 - 17:00    | Session 5: 5G bands <ul style="list-style-type: none"> <li>The status of 5G spectrum across the globe</li> <li>2G/3G Rationalisation</li> </ul>  |

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|  |  | <ul style="list-style-type: none"> <li>Q&amp;A</li> </ul>  |
|  |  | <b>BREAK</b>   |
|  |  | Session 6: Safety and capacity considerations <ul style="list-style-type: none"> <li>5G and RF-EMF</li> <li>The Capacity Challenge</li> <li>Q&amp;A</li> </ul> |

## METHODOLOGY

The on-line program will include Instructor-led presentations, Case Studies, Group Exercises, and Quizzes.

## COURSE COORDINATION

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| <b><u>GSMA Training Coordinator:</u></b><br><br><b>Aanchal Paliwal, Partner &amp; Delivery Manager, Capacity Building, GSMA</b><br><br><a href="mailto:apaliwal@gsma.com">apaliwal@gsma.com</a> | <b><u>ITU Coordinator:</u></b><br><br><b>Eng. Mustafa Al Mahdi</b><br>Programme Officer<br>ITU Arab Regional Office<br>Tel: +202 3537 1777<br>Mobile: +20114 1177573<br>Fax: +202 3537 1888<br>Email: <a href="mailto:mustafa-ahmed.al-mahdi@itu.int">mustafa-ahmed.al-mahdi@itu.int</a> |
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## REGISTRATION

### ITU Academy portal account

Registration 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/5g-path-next-generation>

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