



ITU Centre of Excellence at FEEIT in Skopje

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ITU training activities delivered in 2016 via the ITU Academy

| ITU Academy e-learning course | Dates | Enrolled participants | Participants that completed the course | Number of countries globally |
|----------------------------------------|--------------------------------|-----------------------|----------------------------------------|------------------------------|
| Broadband Internet and Future Networks | 31 May - 27 June 2016 | 123 | 116 | 40 |
| 4G and Next Generation Mobile Internet | 22 November - 19 December 2016 | 73 | 65 | 36 |



Type of participants in the ITU Academy elearning courses



- Different types of participants followed the elearning courses, and they are coming from different organizations, including:
 - National regulators
 - Government organizations and ministries
 - Network and service providers
 - Telecom and IT companies
 - Students from universities
 - Professors from academia and instructors from training centers
 - and individuals that wanted to update their knowledge in the given ICT fields.



ITU e-learning Course: Broadband Internet and Future Networks

| WEEK | MODULE TITLE |
|------|---------------------------------------------------------------------|
| 1 | Module 1: Internet protocols and services |
| 2 | Module 2: Broadband Internet access |
| 3 | Module 3: Broadband Internet services and cloud computing |
| 4 | Module 4: Future Networks by ITU |



ITU e-learning Course Feedback: Broadband Internet and Future Networks

Participants' satisfaction:

- ITU Academy Portal and its facilities easy to use: 94.6 %
- The quality of tutors: 96.4 %
- The coordination of the course: 95.0 %



ITU e-learning Feedback from Participants: Broadband Internet and Future Networks 1/2

In your opinion, how your organization benefiting from the knowledge and experience you acquired through this course? *Please explain*

- My organization would benefit from what I have acquired in terms of contribution towards effective regulation on the value chains of broadband and Future Networks.
- Am willing to share what I have learned with my work colleagues which I hope through sharing will also give them awareness of the basics of future networks and its benefits to our organization.
- Provides us with an introductory to the different types of broadband networks. This is especially useful to officers who need an introduction to the broadband side of the telecommunication industry.
- In the following areas:
My work in TIC regulation
Strengthening my technical knowledge
technical understanding of new technological trends
Increased security in the proposed new regulatory initiatives
Determine solve specific technical objectives

- My organization will know about incoming technologies and prepare to cope with customers need.
- As our organization is broadcasting industry I got some knowledge about IPTV, OTT and broadband technologies so that we can discuss and decide which future trends for broadcast industry we need to choose.
We are implementing in near future LTE and IMS this course gave me a strong highlights and knowledges in those topics.
- My company has a considerable expertise in broadband technology and its sub branches. So for the new projects during their design and planning phase, i will have the ability to give theoretical guidance.
- I'm working for an ISP company and all this info will be very useful for me and my job.
- The online course has exposed several avenues that the organisation I work for can take so that it provides quality service to the customers whilst at the same time making profit. One of the areas that I think will be worth looking into will be to use the OTT services to our advantage i.e. Selling bandwidth to the users of the OTT services and at the same time marketing our on products. The knowledge and experience gained will assist the organisation to plan for the future as there is definitely going to be the need to have networks that will accommodate future demands, especially with the IPv6 address capacity that supports IoT.



ITU e-learning Feedback from Participants: Broadband Internet and Future Networks 2/2

- I am at a desk job and this course has certainly added to my knowledge on the latest technologies. I found the course to be very useful.
- One of the most areas that would be benefited is net neutrality issues.
- The course helps us to have a more comprehensive view of the evolution of the Internet and broadband networks and their potential use in sustainable cities.
- The course is relevant as it makes me understand better the world of ICT. This is an advantage as when am analysing the data from administration side (supply side) i understand better. It also helps me in writing ICT related papers.
- n/a
- Sure, My organization is a provider. This course has added to my knowledge and i has understood the overview of Broadband Internet and Future Networks.
- It will help me in analysing the ICT statistics and writing reports on the same better
-
- I work for the Turkish Regulatory Body (ICTA) and Training materials include up to date information. Very helpful for the regulation side of the sector.
- It helps my organisation through proper understating of new technologies. Planning benefits a lot.
- I'm in academic sector, the main benefit is in order to study the ultimate regulation on telecommunications technologies.
- The mindset of the participants is definitely changed and right now I see things in a different perspective. I realise that there is no other way into the future than plan for the Future Networks.

- It provides a good understanding of where the ICT industry is currently at and the future of it (which is closer than we think). It provides for greater appreciation of the subject and helps in preparing for it.
- It provides a general point of view on the emerging technologies.
- It will contribute towards my daily work and enhance my knowledge on future networks and where technology is heading to and what to expect.
- My organization benefit from this course in many aspects. First we need to build our capacity in the novel new areas of ICTs like OTT, IoT, NGN, 5G, etc... in terms of the technical and legal aspects with the new economy challenges that we will be facing. So sharing best practices by discussing with other people all around the world is a very good way that has been possible within the course earned by ITU Academy. I'm a professional of Telecommunication but this course helped me understand some new guidelines and business trends of the economy. Thanks to all of you ...
- The organization was excellent and this e-learning course was very informative, very well presented, plus enjoyable.

Thanks for all.

- I am more enlightened.
I will assist my organization to understand the Broadband and Future Networks trends so that decisions can be timeously made.



ITU e-learning Course: 4G and Next Generation Mobile Internet

| WEEK | MODULE TITLE |
|------|----------------------------------------------------------------------|
| 1 | Module 1: Mobile Internet fundamentals |
| 2 | Module 2: 4G mobile technologies |
| 3 | Module 3: 4G and next generation mobile broadband services |
| 4 | Module 4: 5G evolution: next generation mobile Internet |



ITU e-learning Course Feedback: 4G and Next Generation Mobile Internet

Participants' satisfaction:

- ITU Academy Portal and its facilities easy to use: 93.3 %
- The quality of tutors: 95.5 %
- The coordination of the course: 96.6 %



ITU e-learning Feedback from Participants: 4G and Next Generation Mobile Internet

In your opinion, how your organization benefiting from the knowledge and experience you acquired through this course? *Please explain*

- The mobile network operator where I work has just recently rolled out it's first LTE service. I believe that the knowledge acquired in this course will help to make better decisions during technical design, procurement, commissioning and troubleshooting of the LTE network. In summary, the things that I have learned from this course will help me to do my job better.
- I thing, the knowledge I acquired trough this course, will be useful in performance analysis of technical as well as business and regulation issues for 4G and next generation networks.
- I work at NTRA of Egypt , this course (material and interactions and discussions quizzes) are very useful for me and NTRA as a regulator (important knowledge, technical, administration) plus in my personal life.
- In my working domain it is necessary to understand the new technologies appearing in the mobile market. So the course covers this requirement.
- Show a certain level of interest in ITU courses.
- Being in charge of the regulatory and policy affairs in my organisation this course is relevant to my position and strenghened me to face regulatory and business challenges even technical aspects of 4G, 5G and Mobile Internet broadband.
- Let me know the origin and trends of the mobile network characteristics and topologies. I will apply this knowledge for analysis and recomendations in my job.

- As an engineer with the national Telecom regulator, it is important to be on top of the current in next generations networks. I will now advice my entity on all technical issues of next generation mobile networks. I will also advice them on what to do as a regulator to prepare for the deployment of 5G networks.
- It will help to implement LTE into our network.
- More knowledge, better professional
- As an expert in Technical Directorate I think that every part of this course would be so helpfull for me in my work.
- Now that I have deeper knowledge in the area I could better see the real picture when preparing and assessing legal acts, solving questions at the NRI.
- In my particular case, I took the course to deepen knowledge in mobile networking issues in order to complement my knowledge because I am involved in virtualization technologies (NFV). Therefore this would benefit my research for the doctorate.
- I work at Regulatory body and especially at IT unit so i must know these stuff clearly which the gave me. It will help in regulatory functions in my office
- The will benefit an increase in technical input due to increased knowledge



Proposal for ITU CoE activities in 2017

- For 2017 the ITU CoE at FEEIT in Skopje proposes two elearning courses as self-sustainable trainings to be provided via the ITU Academy:
 - 1) The first elearning course in 2017 has a draft title "NGN, Cloud Computing and Ultra Broadband", with proposed delivery dates 30 May - 26 June 2017 (duration: 4 weeks).
 - 2) The second elearning course in 2017 has a draft title "Giga Speed Wireless and Mobile Broadband Internet", with proposed delivery dates 21 November - 18 December 2017 (duration: 4 weeks).



Summary

- ITU CoE at FEEIT in Skopje has continued its successful delivery of ITU elearning courses established over past years (since 2009).
- ITU CoE at FEEIT has delivered successfully all planned courses for 2016, both as ITU Academy elearning courses:
 - "Broadband Internet and Future Networks"(31 May – 27 June 2016);
 - "4G and Next Generation Mobile Internet"
 - "Next Generation Broadband Internet Access" (22 November – 19 December 2016).
- There are two proposed ITU Academy elearning courses for 2017:
 - "NGN, Cloud Computing and Ultra Broadband", with proposed delivery dates 30 May - 26 June 2017 (duration: 4 weeks).
 - "Giga Speed Wireless and Mobile Broadband Internet", with proposed delivery dates 21 November - 18 December 2017 (duration: 4 weeks).
- The ITU Academy elearning courses held by the ITU CoE at FEEIT have proven to be self sustainable, high quality, and very interesting for the targeted audience worldwide.



Thank you!