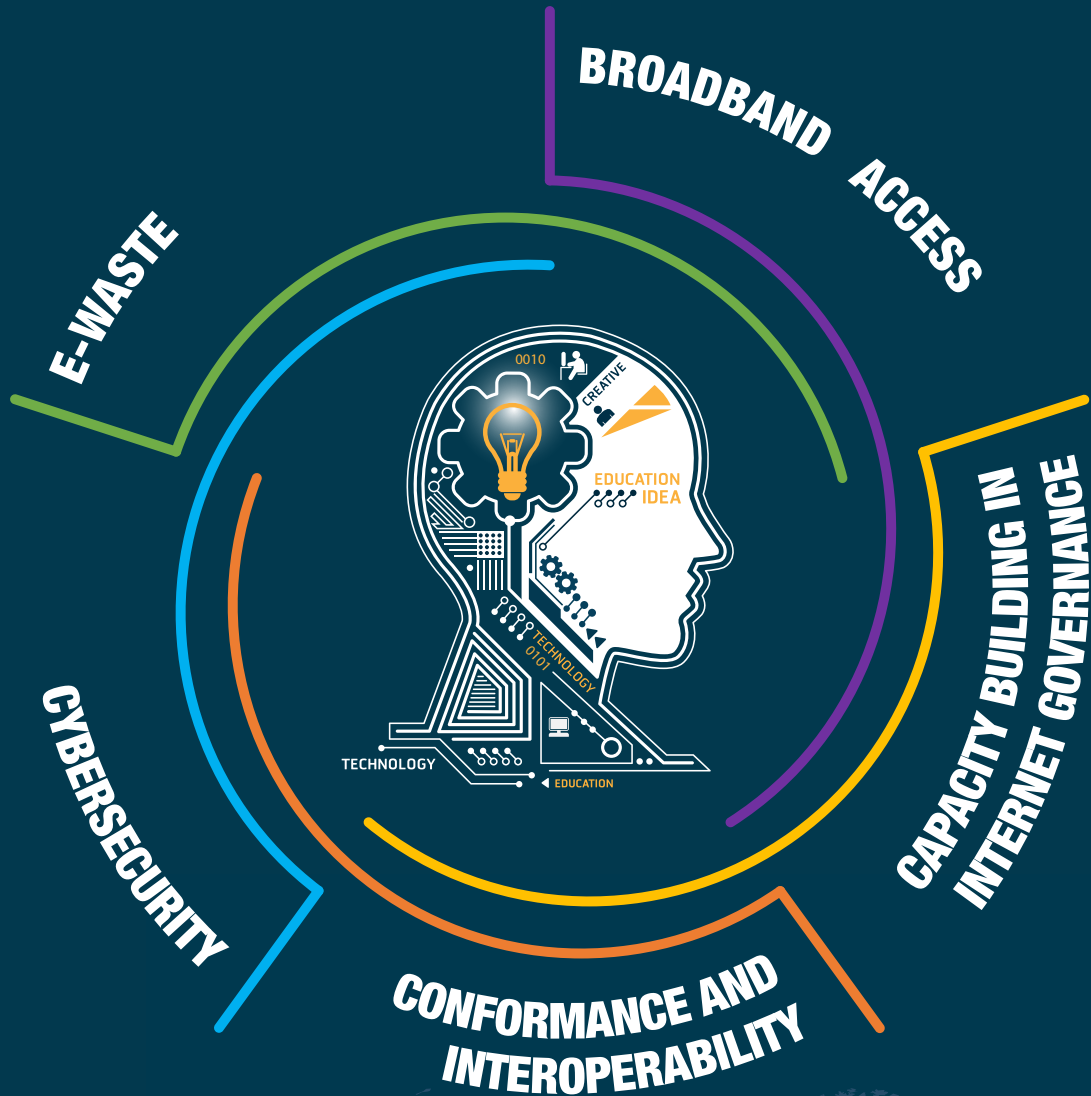


# Training Opportunities 2017

Offered by the European ITU Centres of Excellence





## Scope

- ❖ This catalogue has been produced by Europe Coordination of the Telecommunication Development Bureau, International Telecommunication Union to highlight and promote the capacity building courses provided by the five ITU centres of excellence in Europe.
- ❖ While participation is open to the world, member states in the Europe region (as defined at ITU) are urged to avail of the courses. The countries are Albania, Andorra, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, The Former Yugoslav Republic of Macedonia, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Vatican City State, United Kingdom.
- ❖ The courses aim to increase participant understanding, knowledge, and awareness in the following areas of action:



**BROADBAND ACCESS**



**CAPACITY BUILDING IN INTERNET GOVERNANCE**



**CONFORMANCE AND INTEROPERABILITY**



**CYBERSECURITY**



**E-WASTE**

- ❖ Courses are provided either



**Face to Face**















OR

**Online** – via the ITU Academy e-learning platform

- ❖ All courses have a test component. A certificate is given to successful candidates.
- ❖ Registration as well as payment for the courses are explained on the ITU academy website at [academy.itu.int](http://academy.itu.int)
- ❖ The catalogue content is correct at the time of production. Changes in course dates may occur and are reflected on the ITU academy website at [academy.itu.int](http://academy.itu.int)

## COURSES in chronological order

 <b>Strategic Aspects for Internet Governance and Innovations</b>	<b>3-10 April 2017</b>
<p>IP protocol is the winning technology in the current telecommunication world. "Over IP" is the concept that can be considered in the context of almost all of today's telecommunication services. A good understanding of this "IP world" requires not only knowledge of technical aspects, of the IP technology, but also strategic, political and business issues. The course aims at presenting the current process of innovation on the net from all of these important perspectives.</p>	<p><b>Language</b> English <b>Fees</b> 150 USD</p> <p><b>Mode</b>  <b>Area</b> </p>
 <b>Fiber optic splicing and installation</b>	<b>3-5 May 2017</b>
<p>Participants will be apprised of the fundamental concepts related to light, optical transmission principles, optical source operation, fiber optic cables fusion, optical time domain reflectometer (OTDR) to verify the installation, fiber optic cable junctions and measuring insertion loss with optical power meter.</p>	<p><b>Language</b> English <b>Fees</b> 500 USD</p> <p><b>Mode</b>  <b>Area</b> </p>
 <b>Software conformance testing and audit</b>	<b>1-2 June 2017</b>
<p>This 2-day course addresses the methods and techniques that can applied to software conformance testing. Participants are equipped with an understanding of the basic principles of software testing with concrete applications to telecommunication systems. Processes and methods, that can be used to perform a software conformance audit based on ISO 25000 for any telecommunication software product or system, are also taught.</p>	<p><b>Language</b> English <b>Fees</b> 800 USD</p> <p><b>Mode</b>  <b>Area</b> </p>
 <b>Information security management in Telecommunications – ISO 27001</b>	<b>28-30 June 2017</b>
<p>This course enables participants to develop the expertise needed to support a telecommunication organization in implementing and managing an Information Security Management System (ISMS) based on ISO/IEC 27001, 27002 and ITU Recommendation X.1051 (also published as ISO/IEC 27011), including a thorough grounding in best practices used to implement information security controls from all the areas of ISO/IEC 27002 and 27011.</p>	<p><b>Language</b> English <b>Fees</b> 800 USD</p> <p><b>Mode</b>  <b>Area</b> </p>
 <b>Cyber Security Awareness for SMEs</b>	<b>17 July 2017</b>
<p>A comprehensive "cookbook" for small or medium business enterprises with the aim to identify particular pitfalls while implementing security measures. At the end of the course, the participant should have gained an understanding to identify various security aspects and experience necessary to implement appropriate security measures within voice and data networks of small business enterprises.</p>	<p><b>Language</b> English <b>Fees</b> 150 USD</p> <p><b>Mode</b>  <b>Area</b> </p>



### International summer school on Cybersecurity

14-16 August 2017

The focus of this course is to understand security aspects of operating systems, networks and web applications. Students gain insight into the evolving cyber threats and attacks. They will have the opportunity to meet the experts who work to ensure cybersecurity in companies and enterprises.

Everyday a brief theoretical introduction will be followed by practical exercises in the lab. Students will have the opportunity to try out different kinds of attacks, identify vulnerabilities and learn how to defend against them. At the end of the course they will gain a good knowledge that will help them better protect their computers, mobile phones and life in cyberspace.

**Language** English  
**Fees** Free

**Mode**



**Area**



### Cyber Security Lifecycle of the New Millennium

23 September 2017

A comprehensive overview for developers and it management staff as an introduction to security lifecycles in new millennium. The course is addressed to executives and practitioners such as CEOs, CIOs, CISOs, company policy makers or security architects. In the course we will explain the evolution of tools, policies and security concepts, which can be used to protect the cyber environment and organization and user's assets. We will also address the issue of the development of secure applications and systems. In the morning block participants will gain theoretical foundations in the selected topic, at the afternoon there will be practical training. At the end of the course, the participant should have gained an understanding of security lifecycles needs and experience necessary to identify, plan and possibly secure a company in the digital era economy.

**Language** English  
**Fees** 150 USD

**Mode**



**Area**



### Wireless Access Technologies to Internet Network

25 September -  
2 October 2017

IP protocol is the winning technology in current telecommunications world. "Over IP" is the concept that can be considered in the context of almost all today's telecommunications services. Current users want to have access to any telecommunication services, from any place, and at any moment. That is why mobility and wireless access to Internet plays such an important role. The course aims at presenting the key aspects of the current most important wireless access technologies to this Internet world.

**Language** English  
**Fees** 150 USD

**Mode**



**Area**



### Broadband Access

11-12 October 2017

There is general consensus that broadband networks, services and applications have enormous potential to deliver dramatic results in education, health and socio-economic. Broadband, as an ITU area of action, is instrumental in "Connecting the unconnected". Having a good grasp of the strategic implication and relevant technical expertise on broadband access is needed. This capacity building course aims to provide participants with a better technical understanding of broadband access. Participants will be taught the general aspects of broadband access including quality of service, net neutrality and cost models. A special focus is given to wireless (3GPP, WLAN) and fixed (DSL, FTTH) access technologies as well as transport networks (optical, IP/MPLS).

**Language** English  
**Fees** 500 USD

**Mode**



**Area**





### Network and IT Security

18-19 October 2017

Technology is ever evolving and new security threats continue to be devised. IT and network security is not yet at the core of many national and industrial technology strategies. Awareness at all socio-economic level, responsible usage of IT systems and effective application of measures including technical ones, must be implemented and reviewed in the light of new types of attacks. This course provides participants with an overview of the current threat scenarios, classifications and examples of attacks including denial of service, routing and DNS attacks. It elaborates on the generic security concepts and mechanisms to prevent as well as detect and mitigate attacks. Encryption methods, the Public Key Infrastructure and Key management as well as Intrusion Detection Systems, Firewalls and Network Access Control concepts and techniques are explained in depth.

Language English  
Fees 500 USD

Mode



Area



### Security and QoS in Internet Network

26-27 October 2017

This course will focus on Security and Quality of Service (QoS) on the net from technology, regulation and business aspects. It will cover internet fundamentals, including internet protocols and architectures, internet security standards and approaches as defined by IETF (Internet Engineering Task Force), as well as security architectures for end-to-end communications. It will incorporate cybersecurity approaches from the ITU viewpoint, and security aspects of emerging cloud computing and Internet of Things (IoT). Internet QoS, including the standardized solutions and practical approaches for provision of end-to-end as well as QoS parameters as defined by the ITU and QoS for data (i.e., Over-The-Top services) and mobile services, will be discussed. Network neutrality, internet key performance indicators and their measurements will be explained.

Language English  
Fees 500 USD

Mode



Area



### Giga Speed Wireless and Mobile Broadband Internet

21 November -  
18 December 2017

This course will focus on Giga Speed Wireless and Mobile Broadband Internet from technology, regulation and business aspects. It will cover mobile broadband, including mobile networks and internet convergence, LTE standardization by 3GPP, LTE-Advanced, Evolved UTRAN (E-UTRAN), Evolved Packet Core (EPC), IP Multimedia Subsystem (IMS), LTE-Advanced Pro, spectrum management as well as business and regulation aspects of mobile broadband. Further, the course will incorporate Giga Speed WiFi access, including legacy WiFi standards and architectures, Giga speed WiFi (IEEE 802.11ac), 60 GHz Gigabit WiFi (IEEE 802.11ad), WiFi for mobile traffic offload and hotspot architectures. Also, it will cover 5G Giga speed mobile broadband Internet, including Internet of Things (IoT) in 5G architectures, 5G mobile core, Software Network Virtualization (SDN) for 5G, IPv6 in 5G mobile networks, as well as spectrum considerations and business aspects for 5G mobile broadband.

Language English  
Fees 150 USD

Mode



Area



### CE mark for Telecommunication, Achieving compliance From the Directives to the Test Lab

22-24 November  
2017

This 3-day course will present trainees with the legal requirements contained in the European Commission (EC) Directives that need to be fulfilled in order to market a product within the EC (CE mark). The trainee will be presented with the new approach for directives pertinent to ICT. These are explored in depth to understand the essential requirements, the selection of standards and test methods required in order to achieve conformity with all the applicable standards.

Language English  
Fees 700 USD

Mode



Area





### NGN, Cloud Computing and Ultra Broadband

30 May-26 June 2017

With focus from technology, regulation and business aspects, this course will cover Next Generation Networks (NGN), including service architectures (IP Multimedia Subsystem - IMS), control and signaling in NGN (SIP, Diameter), IPv6-based NGN, management and performance measurements in NGN, future evolution of NGN, as well as NGN business and regulatory aspects. The course will incorporate cloud computing framework from the ITU, including systems and architectures and services models (IaaS, PaaS, SaaS, NaaS, CaaS), cloud security and privacy, Over-The-Top (OTT) and telco cloud implementations as well as business and regulation aspects of cloud computing. Ultra-broadband Internet access, including xDSL access networks (ADSL2+, VDSL2), cable access networks, Fiber-To-The-Home (FTTH), next generation passive optical access (NG-PON, NG-PON2, 10G-EPON) and active optical access networks, Metro Ethernet, as well as business and regulation aspects of ultra-broadband, are covered.

**Language** English  
**Fees** 150 USD

**Mode**



**Area**



### Legal and regulatory barriers to the introduction of cloud services in the EU

23-24 November 2017

This workshop will explain, from a practical point of view, the legal and regulatory barriers to the development of cloud services. The discussions will encompass

- Existing sources of law from a national and international perspective, in the context of various, differentiating cloud definitions, cloud service models and different subject matter of such services
- Future regulations such as, the General Data Protection Regulation and its impact on the cloud regulatory framework
- Issues related to cloud standardization and the extent to which standardization may support the legal framework related to the cloud environment
- Service procurement issues including the contents of cloud contracts, service level contracts and the enforcement of such contracts
- Risks connected with cloud contracts from the perspective of cloud vendors, including state and local government vendors, private vendors, cloud service providers and brokers as well as auditors
- Issues involved in auditing cloud services

**Language** English  
**Fees** 500 USD

**Mode**



**Area**



## Overview of CoE initiative

The Centres of Excellence (CoE) programme was launched by the International Telecommunication Union (ITU) at the turn of the millennium, aiming to support capacity building in the field of information and communication technologies (ICTs). Designed to offer continuous education to ICT professionals and executives in the public and private spheres through face-to-face or distance learning programmes, the Centres serve as regional focal points for professional development, research, and knowledge sharing, as well as provide specialist training services to external clients. With the support from multilateral and regional organizations, CoE networks have been established in a number of regions including Africa, the Americas, Arab States, Asia-Pacific, Commonwealth of Independent States (CIS) and Europe. The network is composed of 32 Centres across the globe, six each in the Africa, Americas, Arab, and Asia-Pacific regions, five in the Europe region and three in the CIS region.

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Priority areas: Cybersecurity

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Priority areas: Cybersecurity, Broadband Access

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Priority area: Broadband Access

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Priority areas: Capacity Building in Internet Governance

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Priority areas: e-Waste, Conformance and Interoperability

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