



ITU Centres of Excellence Network for Europe

National Institute of Telecommunications

Face-to-Face Training Course on

QoS Technologies and Regulation for Fixed and Mobile

**Warsaw, Poland
24-25 October 2019**

INFORMATION NOTE

1. INTRODUCTION

This course will focus on technical, business and regulatory aspects of QoS for Fixed and Mobile Networks. It includes QoS (Quality of Service) and QoE (Quality of Experience) fundamentals by ITU, as well as traffic and QoS management in Internet and IP networks. Further, it includes QoS for fixed ultra-broadband access, including QoS solutions in metallic and optical networks, carrier grade Ethernet QoS, as well as end-to-end QoS. The course also covers QoS for mobile ultra-broadband access, including 4G and 5G mobile technologies and their QoS capabilities and approaches. The telecom networks are built for provision of services. In that manner the course covers QoS-enabled services provisioning, including QoS and QoE for VoIP, video and IPTV services, as well as QoS for Internet data services (i.e., Over-The-Top services). Each telecommunication network is interconnected to other networks forming the global network of Internet and managed IP networks, so the course includes interconnection and its QoS aspects. Further, it covers generic and specific QoS parameters, KPIs (Key Performance Indicators) and their measurements. The global Internet is based on network neutrality approach for OTT/data services, so the course also covers network neutrality and its regulation. The QoS constantly increases in its importance with the digitization and innovation of various critical services, so the course includes QoS regulatory framework based on technical, business/economic and regulatory principles of QoS for services over fixed and mobile networks.

2. VENUE OF THE TRAINING

National Institute of Telecommunications (Instytut Łączności)
Szachowa str. 1, 04-894 Warsaw, Poland
Conference room 754

3. COORDINATORS

<u>INSTITUTE COORDINATOR</u>	<u>ITU COORDINATOR</u>
Dr Sylwester Laskowski tel: (+48) 22 51 28 230 s.laskowski@itl.waw.pl	Name: Rosheen Awotar-Mauree Email address: eurregion@itu.int

4. REGISTRATION

Registration is online at <https://academy.itu.int/index.php/training-courses/full-catalogue/qos-technologies-and-regulation-fixed-and-mobile>

5. VISA FORMALITIES

Information about visa-free countries (countries, which citizens are not required to be in possession of a visa when entering Poland for less than 90 days) is available on the page: https://www.msz.gov.pl/en/travel_to_poland/entering_poland/visa_free/visa_free_countries

6. ACCOMMODATION

NIT does not organize hotels for participants of the training.

7. LIST OF PROPOSED HOTELS

We recommend the following list of hotels:

- **HOTEL Novotel Warszawa Centrum ******
Marszałkowska Street 94/98, Warsaw
www.novotel.com
- **HOTEL Holiday Inn Warszawa Józefów ******
Telimieny Street 1, 05-420 Jozefow
www.holiday.aquila.pl
- **HOTEL Metropol *****
Aleje Jerozolimskie 45, Warsaw www.hotelmetropol.com.pl
- **HOTEL Sobieski ******
Plac Artura Zawiszy 1, 02-025 Warsaw
www.sobieski.com.pl
- **HOTEL Boss *****
Żwanowiecka Str. 20, 04-849 Warsaw
www.hotelboss.pl

8. DETAILS OF ARRIVAL AND TRANSPORT

HOW TO GET TO THE HOTELS FROM THE AIRPORT?

- **Hotel Novotel**
Transportation from airport to Hotel Novotel: by bus no 175, hotel is localized on bus stop "Centrum"
- **Hotel Holiday Inn**
Transportation from airport to Hotel: by bus no 175 from the airport to bus stop "Centrum", next from "Centrum" to "Jozefow" by private line bus "Minibus" or "Arka"
- **Hotel Metropol**
The public bus No 175 to the airport has a bus stop in front of the hotel building.
- **Hotel Sobieski**
Transportation from airport to Hotel Sobieski: by bus no 175, hotel is localized on bus stop "Plac Zawiszy"
- **Hotel Boss**
Transportation from airport to Hotel: by bus no 175 from the airport to bus stop "Centrum", next from "Centrum" to "Warszawa Miedzeszyn" by private line bus "Minibus" or "Arka"

HOW TO GET TO THE TRAINING VENUE FROM THE HOTELS?

Hotel Boss is placed about 15 minutes walk from the training venue. From Novotel, Metropol, Holiday Inn, and Sobieski Hotels participants can travel by private line bus „Minibus” or „Arka”. The closest to the NIT bus stop is called „Szachowa”.

9. CURRENCY

The currency in Poland is Polish Zloty (PLN).

1 PLN = 0,26 USD

Visa and Master Card are accepted.

Banks are typically opened from 9:00 am to 5 pm.

10. ELECTRICAL APPLIANCES

The voltage in Poland is 220 volts.

Types of electricity plugs used in Poland: C, E & F

11. LANGUAGES

The official language in Poland is Polish.

The training will be delivered in English.

12. SECURITY

There is no suggestion.

13. MEDICAL AND HEALTH

There is no any special suggestion relating the requirements for medical insurance.

Tap water is suitable for drinking after boiling.

14. WEATHER

Information about temperature in Poland can be found here:

<http://www.accuweather.com/pl/pl/warsaw/274663/november-weather/274663>

15. INTERNET

In the training venue there is a free WiFi access to the Internet Network.