ITU Centres of Excellence Network for Europe Region

A.S. Popov Odessa National Academy of Telecommunications (ONAT)

Online Training Course on

BUILDING BROADBAND TELEMEDICINE NETWORKS AND PROVIDING E-HEALTH SERVICES AT THE LOCAL, REGIONAL AND NATIONAL LEVELS

14-15 December 2020

COURSE OUTLINE

COURSE DESCRIPTION

Title	**Building broadband telemedicine networks and providing e-Health services at the local, regional and national levels**
Objectives	This training aims to give participants an idea of determining the optimal variant of building telemedicine networks at the local, regional and national levels, taking into account the specificity of the countries in the region; construction of telemedicine networks, including the selection of hardware and software, as well as its installation and configuration; the provision of medical services using telemedicine networks, including the processing of digital medical data, personalized medical-service records, the electronic medical record, the electronic health record, and so on.
Dates	14-15 December 2020
Duration	2 days
Registration deadline	10 December 2020
Training fees	USD 150
Course code	20OI24821EUR-E

LEARNING OUTCOMES

Upon completion of this training, participants will have understanding of:
- the determining the optimal variant of building telemedicine networks;
- the development of standard project documentation for the construction of telemedicine networks;
- institutional arrangements for the implementation and provision of telemedicine services.

TARGET POPULATION

This workshop is targeted at technical staff, engineers, senior and mid-level management staff of telemedicine and telehealth service providers, medical institutions, clinics and hospitals, for doctors, for medical students. It is also of interest to employees of ministries and government healthcare authorities dealing with the issues of telemedicine network development and providing e-Health services.

TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Mr. Vadim Kaptur Vice-rector for Scientific Work, PhD A.S. Popov Odessa National Academy of Telecommunications	Email: vadim.kaptur@onat.edu.ua
Mr. Vladyslav Kumysh Head of Research Development Department, PhD A.S. Popov Odessa National Academy of Telecommunications	Email address: rdd@onat.edu.ua
Mr. Roman Tsarev Senior lecturer of Telecommunication Networks Department A.S. Popov Odessa National Academy of Telecommunications	Email address: tsarev@onat.edu.ua
Ms. Iryna Tymchenko Senior Researcher A.S. Popov Odessa National Academy of Telecommunications	Email address: onat@onat.edu.ua

EVALUATION

There are 2 practical tasks inside the course which have to be completed. Also on the last day of the course a quiz test will be assigned. It will consist of 20 questions (multiple choice) which should be solved in a time frame of 90 minutes, with at least 12 correct answers (60%).

The course evaluation for obtaining the certificate at the end is based primarily on the results from the Quiz, however, the completed practical tasks and replies to the raised discussion topics may also be considered in the evaluation process.

TRAINING SCHEDULE AND CONTENTS / AGENDA

Day, Date / Session, Time	Activity	Exercises and interactions
14 December 2020, Monday Live session 09:00 – 09:20 CET	**Networking and Testing of Audio and Video**	
09:20 – 10:00 CET	**Instructor-led presentation The Role of eHealth and Telemedicine in the Developing World** *The lecture will present the concept and main components of e-health, the main problems in the development of e-health, the basic concepts of e-health. The concept of telemedicine and its main tools, types of telemedicine services, features of building telemedicine networks, successful telemedicine projects will also be considered.*	
10:00 – 10:40 CET	**Instructor-led presentation E-Health Management Systems and Specialized Medical Information Systems. Using e-health to provide health services during quarantine and to prevent the spread of COVID 19.** *The lecture will present the principles and data flows circulation in e-health, features of building e-health management systems, medical expert systems. The basic principles of organizing an automated workplace for medical personnel, information systems for maintaining electronic medical records, the concept and principles of e-pharmacy will be considered. The issues of using e-health tools to provide medical services during quarantine and to prevent the spread of COVID 19 will also be discussed.*	
10:40 – 11:00 CET	**E-coffee**	
11:00 –11:40 CET		**Group exercise Searching for Health Information and Working with Databases**

		The basic principles of searching for medical information on the Internet, the principles of using cloud technologies for storing medical information, databases for storing medical information will be considered. *Participants in practice will test the knowledge gained in the process of completing tasks prepared by trainers.*
11:40 –12:40 CET		**Chat** Participants' questions to the tutors
12:40 – 13:00 CET	**E-coffee**	
13:00 – 13:40 CET	**Instructor-led presentation** **Basic principles of e-health services delivery. Directions for developing e-health based on world examples** *The lecture will present the concept and principles of m-health, remote monitoring systems in e-health, specialized software for the provision of e-health services. It will also cover issues such as digital health information processing, personalized accounting of medical services and other services.*	
(self-paced at any time-slot)		**Discussion Forum (20 minutes)** Replies to the raised topics
15 December 2020, Tuesday Live session 09:00 – 09:20 CET	**Networking and Testing of Audio and Video**	
09:20 – 10:00 CET	**Instructor-led presentation** **Recommendations on choosing the modern technical solutions for design of e-health systems, including telemedicine networks** *The lecture will consider the classification*	

	model for building telemedicine networks, as well as approaches to the typical design of telemedicine networks, including the preparation of initial data, the composition of typical design solutions, the main sections of the project in the typical design of telemedicine networks.	
10:00 – 10:40 CET	**Instructor-led presentation** **Examples of ICT best practices in healthcare** *The lecture will present the principles of organizing operational dispatch services for emergency medical care, popular software and hardware systems in e-health, an overview of the main programs designed to work with medical data.*	
10:40 – 11:00 CET	**E-coffee**	
11:00 –11:40 CET		**Group exercise** **Determining the optimal option for building telemedicine networks at the local, regional and national levels** *A methodology for choosing the optimal option for building telemedicine networks will be presented, using which the participants will complete a practical task aimed at preparing the basis for a technical task for designing a telemedicine network.*
11:40 –12:40 CET		**Chat** Participants' stand-up devoted to lectures **(5 minutes for each participant)** Participants' questions to the tutors
(self-paced at any time-slot)		**Discussion Forum (20 minutes)** Replies to the raised topics
		Quiz 20 questions (multiple choice) / 90 minutes

At the 1st and 2nd working days before noon (according to the GMT+1 time) there will be posted a discussion topics in Forum by the course tutor and they are intended to point to the participants the main subject covered in the lectures on the given day.

Participants could also raise their own discussion topic thread on the appropriate place for it that is "General discussions" forum.

At the end of these days the tutor will give a summary of the day on the raised daily Forum topics.

METHODOLOGY

At the 1st and 2nd working days there will be live sessions with instructor-led presentations. In total there are 5 instructor-led presentations during the course.

Also there will be a group exercise each day with a practical task inside which has to be completed. In total there are 2 group exercises during the course which means 2 practical tasks to be completed.

Discussion forum will be organized based on discussion topics given daily, where students are highly encouraged to participate and interact with instructors and other students.

Quiz test will be assigned on the last day of the course.

All announcements for all events (lectures, quiz, chat and forum) will be given in a timely manner (prior to the event) by the course tutor.

COURSE COORDINATION

Course coordinator:	ITU coordinator:
Name: *Mr. Vladyslav Kumysh* Email address: rdd@onat.edu.ua	Name: *Mr. Jaroslaw Ponder* Email address: EURegion@itu.int

REGISTRATION AND PAYMENT

ITU Academy portal account

Registration and payment 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/index.php/user/register

Training 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/building-broadband-telemedicine-networks-and-providing-e-health-services-local-regional-and-national

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

Payment

1. On-line payment

A training fee of USD 150 per participant is applied for this training. Payments should be made via the online system using the link mentioned above for training registration at https://academy.itu.int/training-courses/full-catalogue/building-broadband-telemedicine-networks-and-providing-e-health-services-local-regional-and-national .

2. Payment by bank transfer

Where it is not possible to make payment via the online system, select the option for offline payment to generate an invoice using the same link as above. Download the invoice to make a bank transfer to the ITU bank account shown below. Then send the proof of payment/copy of bank transfer slip and the invoice copy to Hcbmail@itu.int and copy the course coordinator. **All bank transaction fees must be borne by the payer**.
Failure to submit the above documents may result in the applicant not being registered for the training.

3. Group payment

Should you wish to pay for more than one participant using bank transfer and need one invoice for all of them, create an account as **Institutional Contact. Institutional Contacts** are users that represent an organization. Any student can request to be an institutional contact or to belong to any existing organization.

To do this, head to your profile page by clicking on the "**My account**" button in the user menu. At the bottom of this page you should see two buttons:

a. If you want to **become an institutional contact**, click on the "**Apply to be an Institutional Contact**" button. This will redirect you to a small form that will ask for the organization name. After you fill the name of the organization you want to represent, click on "**continue**" and a request will be created. An ITU Academy manager will manually review this request and accept or deny it accordingly.

b. If you want to **belong to an existing organization**, click on the "**Request to belong to an Institutional Contact**" button. This will redirect you to a small form that will ask you to select the organization you want to join from an organization list. After you select the correct organization, click on "**continue**", a request will then be created. The Institutional Contact that represents that organization will manually accept or deny your request to join the organization.

ITU BANK ACCOUNT DETAILS:	
Name and Address of Bank:	UBS Switzerland AG Case postale 2600 CH 1211 Geneva 2 Switzerland
Beneficiary:	Union Internationale des Télécommunications
Account number:	240-C8108252.2 (USD)
Swift:	UBSWCHZH80A
IBAN	CH54 0024 0240 C810 8252 2
Amount:	USD 150
Payment Reference:	CoE-EUR 24821- P.40595.1.10

4. Other method of payment

If due to national regulations, there are restrictions that do not allow for payment to be made using options 1 & 2 above, please contact the ITU coordinator for further assistance.