



# **ITU Centre of Excellence at FEET in Skopje, Macedonia**

Meeting of the Steering Committee  
for the Centres of Excellence in Europe in 2019

**Prof. Dr. Toni Janevski**

Faculty of Electrical Engineering and Information Technologies  
Ss. Cyril and Methodius University, Skopje, Macedonia

Email: [tonij@feit.ukim.edu.mk](mailto:tonij@feit.ukim.edu.mk)



# Contents

- Brief summary of FEEIT
- Priority area of FEEIT for the 2019-2022 cycle of activities
- ITU CoE experiences from 2009-2014 and 2015-2018 cycles
- Strategy for ITU CoE courses
- Conclusions



# Brief introduction to FEEIT

- The Faculty of Electrical Engineering and Information Technologies (FEEIT) is founded in 1959 within the Ss. Cyril and Methodius University in Skopje, Macedonia.
  - at present time over 3000 students are studying in all three cycles (undergraduate, master and doctoral studies).
- Ss. Cyril and Methodius University in Skopje is the first state University in the Republic of Macedonia, founded in 1949.
  - the University represents a functional community of 24 faculties (including the FEEIT), and 9 research institutes.
  - around 50000 students study in all Faculties in all cycles of studies.
  - the academic personnel is over 3000.

# Studies at FEEIT

- The Faculty of Electrical Engineering and Information Technologies is organized in 10 Institutes and has 19 laboratories for education and research, that provide
  - undergraduate study programmes and master programmes in all areas of telecommunications, electronics, computer science, automation, power engineering, as well as PhD programmes in electrical engineering and information technologies.
- All studies are organized according to the Bologna agreement and the European Credit Transfer System (ECTS).
- Our academic work is focused on educating students with the best professional knowledge and with analytical and critical ability of thinking and reasoning.

# Quality and mission

- We are continuously following the new developments and trends, and as a dynamic and active institution, we are adapting to the requests and needs of the global society.
  - The FEEIT is a symbol of quality and we are strongly devoted to it, and aim to continue its successful tradition of which we are very proud.
  
- The FEEIT mission is:
  - To provide continuing education and professional individuals in electrical engineering entrepreneurship and new technologies that will work effectively and promote new work and new opportunities.

# University's mission

- The Ss. Cyril and Methodius University's mission is to be:
  - an autonomous, scientific and higher educational university which provides teaching, scholar and applied activities in technical, natural sciences and mathematics, bio-technical, artistic, medical and social sciences;
  - a university open to all students on the basis of equality and their academic results regardless of their ideological, political, cultural and social origin;
  - a university that coordinates its academic offer to the needs of the social surrounding, and has continuously dynamic relation towards it;
  - a university that creates stimulative environment for its employees, providing them a progress of their abilities in order to accomplish its mission;
  - a university which develops long-life and continuing education;
  - a university determined to achieve the European norms and standards in all spheres of its activities.

# Priority area of FEEIT for the 2019-2022 cycle of activities

- The **priority area of FEEIT for 2019-2022** ITU CoE trainings in Europe is **“Wireless and Fixed Broadband Access”**.
- Broadband access topics are the following:
  - ☐ Fixed broadband/ultra-broadband access,
  - ☐ Mobile broadband/ultra-broadband access,
  - ☐ Next Generation Networks (NGN) evolution and Next Generation Access (NGA),
  - ☐ Broadband Internet technologies,
  - ☐ Future networks,
  - ☐ Future Internet,
  - ☐ 4G/4.5G/5G mobile networks and services,
  - ☐ Business aspects of broadband access, regulation aspects of broadband access.



# ITU Academy web portal

<http://academy.itu.int>



ITU Academy  
URL

Here is given a  
link to upcoming  
ITU Academy  
trainings

The screenshot displays the ITU Academy website interface. At the top, a browser window shows the URL <https://academy.itu.int/index.php?lang=en>. The main content area is divided into several sections:

- COURSES**: Features three cards for "Business and Management", "Indigenous People", and "ITU-T Courses".
- WHAT'S NEW**: Includes announcements for the "ITU CBS SANTO DOMINGO 2018", "Global ICT Capacity Building Symposium", "Internet Governance", and "Digital Marketing Workshop".
- UPCOMING TRAININGS**: A section highlighted with a red box, listing three training sessions from March 5th to 30th, including "Protocolos de Comunicaciones para Internet de las...", "Emerging Trends in Regulation of ICTs", and "Legal and regulatory barriers to the introduction...".
- GROUP ON CAPACITY BUILDING INITIATIVES (GCBi)**: A section at the bottom left.
- GLOBAL ICT CAPACITY BUILDING SYMPOSIUM**: A section at the bottom center.
- PARTNERSHIPS**: A section at the bottom right.
- Capacity Building in a Changing ICT Environment 2017**: A featured course at the top right.
- MY COURSES**, **VIDEOS**, and **TRAINING PROGRAMMES**: Vertical sections on the right side.
- SUBSCRIBE**: A section at the bottom right with an email input field.





# User identification in the ITU Academy

ITU Academy user account is uniquely identified by the user's email address.

NGN, Cloud Computing x

International Telecommunications Union (ITU) [CH] | <https://academy.itu.int/courses/user/view.php?id=209&course=1125>

ITU Academy  
empowering minds

You are logged in as TONI JANEVSKI (LOG OUT)

HOME THE ACADEMY TRAINING EVENTS MY PROFILE MY COURSES LEARNING RESOURCES REGISTRATION HELP ARCHIVE MY INVOICES

EDIT PROFILE

Toni Janevski

ADMINISTRATION

- Course administration
- Switch role to...

PEOPLE

- Participants

LATEST NEWS

Add a new topic...

Closing words on the ITU Academy course "NGN, Cloud Computing and Ultra Broadband"

28 Jun, 00:57 Toni Janevski

Older topics ...

RECENT ACTIVITY

Activity since Tuesday, 5 September 2017, 1:36 AM

Full report of recent activity...

No recent activity

HOME / TECHNOLOGIES AND SERVICES / 19263-NGN, CLOUD COMPUTING AND ULTRA BROADBAND / PARTICIPANTS / TONI JANEVSKI

Toni Janevski

Toni Janevski, PhD, is a Professor at the Faculty of Electrical Engineering and Information Technologies, Ss. Cyril and Methodius University in Skopje, Macedonia.

User details

- Edit profile
- Email address: **tonij@feit.ukim.edu.mk**

Country: Macedonia

City/town: Skopje

Administration / Ministry: ☐

Administration / Regulator: ☐

Telecom / ICT Agency: ☐

Miscellaneous

- Full profile
- Blog entries
- Notes
- Forum posts
- Forum discussions

Reports

- Today's logs
- All logs
- Outline report
- Complete report
- Statistics
- Browser sessions

Login activity

Last access to course: Thursday, 7 September 2017, 1:36 AM (1 sec)

"ITU Centre of Excellence at FEEIT in Skopje", Prof. Dr. Toni Janevski



# ITU Academy course cover page

## Inside view



Title of the  
ITU Academy  
course.

Course: Giga Speed Wire X

International Telecommunications Union (ITU) [CH] | <https://academy.itu.int/courses/course/view.php?id=1118>

You are logged in as TONI JANEVSKI (LOG OUT)

HOME THE ACADEMY TRAINING EVENTS MY PROFILE MY COURSES LEARNING RESOURCES REGISTRATION HELP ARCHIVE MY INVOICES EDIT PROFILE

ADMINISTRATION

- Course administration
  - Turn editing on
  - Edit settings
- Users
- Filters
- Reports
- Grades
- Badges
- Question bank
- Repositories
- Switch role to...

PEOPLE

- Participants

LATEST NEWS

Add a new topic...

Closing words on the ITU Academy course  
"Giga Speed Wireless and Mobile Broadband Internet"  
20 Dec, 00:49 Toni Janevski

Older topics ...

RECENT ACTIVITY

Activity since Friday, 23 February 2018, 4:02 AM

Full report of recent activity...

No recent activity...

HOME / TECHNOLOGIES AND SERVICES / 19264-GIGA SPEED WIRELESS AND MOBILE BROADBAND INTERNET

ITU Centres of Excellence Network

GIGA SPEED WIRELESS AND MOBILE BROADBAND INTERNET

ITU Centres of Excellence Network for Europe

Giga Speed Wireless and Mobile Broadband Internet

Dates: 21 Nov - 18 Dec 2017

Tutor & Coordinator: Toni Janevski  
Training Coordinator:

Tutor & Coordinator: Prof. Dr. Toni Janevski  
Tutor Assistants: Dr. Tomislav Shuminoski, Dr. Pero Latkoski  
Training Coordinator: Jaroslav Ponder

Tutors and  
coordinators.

“ITU Centre of Excellence at FEEIT in Skopje”, Prof. Dr. Toni Janevski



# ITU Academy courses: Experiences in 2009-2011

ITU Academy e-learning course	Year	Enrolled participants	Participants that completed the course	Number of countries globally
Next Generation Networks - NGN	2010	77	<b>69</b>	<b>17</b>
NGN services VoIP and IPTV	2011	66	<b>59</b>	<b>20</b>
Next Generation Mobile and Wireless Networks	2011	100	<b>89</b>	<b>33</b>



# ITU Academy courses: Experiences in 2012-2014

ITU Academy e-learning course	Year	Enrolled participants	Participants that completed the course	Number of countries globally
Future Internet	2012	101	<b>82</b>	<b>39</b>
Mobile Broadband: LTE/LTE-Advanced, WiMAX and WLAN	2012	189	<b>144</b>	<b>44</b>
Broadband and Next Generation Networks	2013	150	<b>124</b>	<b>45</b>
4G Mobile and Future Internet	2013	149	<b>97</b>	<b>40</b>
NGN, Future Networks and Cloud Computing	2014	130	<b>82</b>	<b>44</b>
Wireless and Mobile Broadband Internet	2014	215	<b>131</b>	<b>50</b>



# ITU Academy e-learning courses:

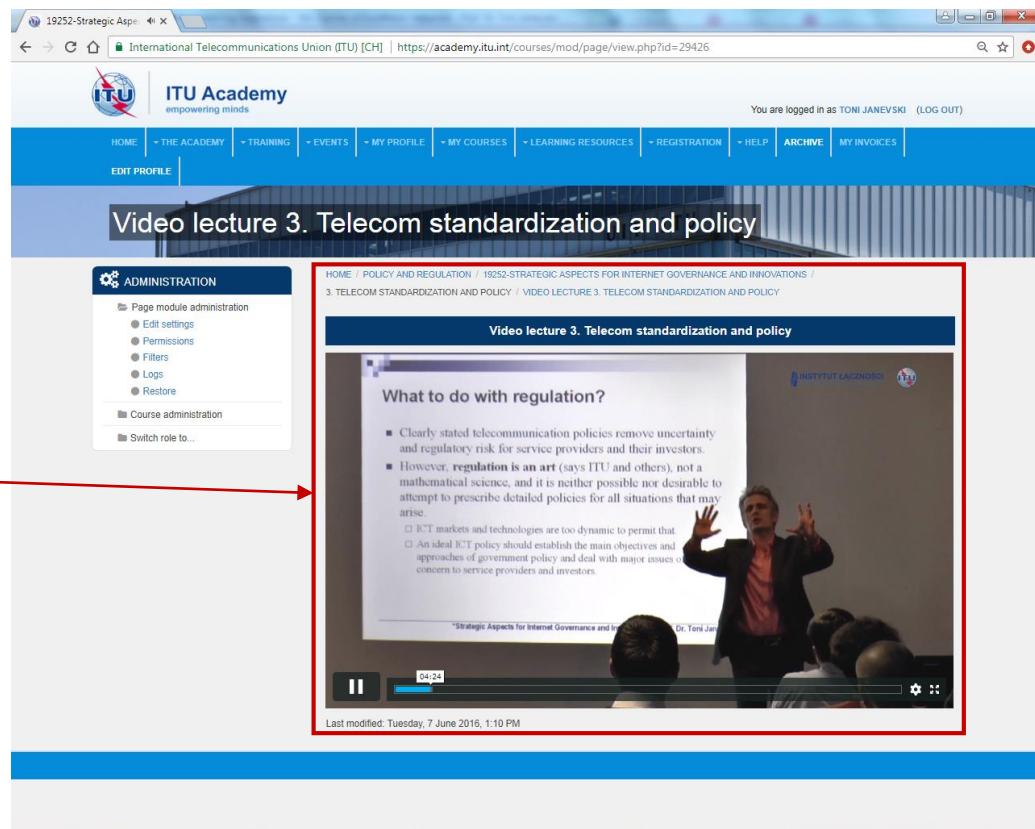
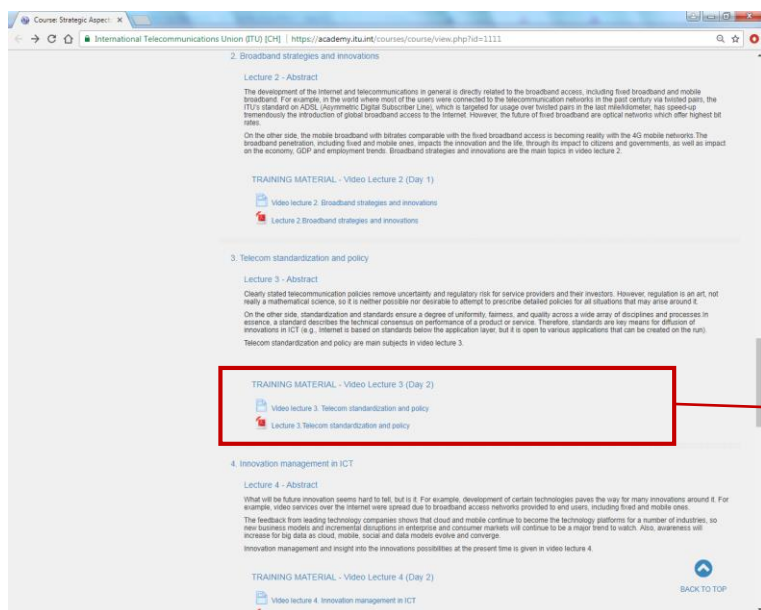
## Experiences in period 2014-2018

ITU Academy e-learning course	Year	Enrolled participants	Participants with certificates	Number of countries
Next Generation Broadband Internet Access	2015	139	<b>86</b>	<b>40</b>
Mobile Broadband	2015	157	<b>77</b>	<b>36</b>
Broadband Internet and Future Networks	2016	123	<b>116</b>	<b>40</b>
4G and Next Generation Mobile Internet	2016	73	<b>65</b>	<b>36</b>
NGN, cloud computing and ultra-broadband	2017	106	<b>86</b>	<b>26</b>
Giga Speed Wireless and Mobile Broadband Internet	2017	64	<b>54</b>	<b>26</b>
Future Broadband Internet Access	2018	100	<b>109</b>	<b>38</b>
Next Generation Mobile Broadband	2018	78	<b>70</b>	<b>29</b>



# ITU CoEs collaboration: E-learning based on face-to-face training

- ITU face-to-face training at NIT in Warsaw is video recorded and after the post-production it is used for ITU e-learning course on the ITU Academy.



“ITU Centre of Excellence at FEEIT in Skopje”, Prof. Dr. Toni Janevski



# Key strategy for success of ITU CoE: Increase and maintain the appeal for trainings offered via the ITU Academy

- Main approach which brings success is:
  - To **continue the successful** programmes
  - To use **multiple delivery channels**: e-learning, face-to-face, blended
  - To use **ITU Academy platform** as a medium for capacity-building of managers and engineers, but also other with inter-disciplinary interests in telecommunications/ICT areas.
- To create and deliver **well structured and well designed courses**.
- To use already **proven successful practices** (where participants are satisfied) and to provide **consistency** in the courses delivery
  - Participants that are satisfied by a given course will join some of next ITU courses, and vice-versa.





# Key strategy for success of ITU CoE: Creating excellent e-learning practices

- Best e-learning practices are created by evolution of courses and the e-learning process by:
  - Finding the most relevant **subject** areas/sub-areas
  - Preparing quality training **materials** in a timely manner
  - Structuring of courses and alignments to **learning objectives**
  - Providing **professional** and encouraging work
  - Improving the course **organization**
  - Setting a course scheme that fits participants needs and creates **high user experience**
  - **Focusing on students** (i.e., course participants) and what they need
  - Having **efficient coordination** before, during and after the course







# Key strategy for success of ITU CoE: Marketing of the ITU CoE courses

- **Course marketing** can be based on several **methods**:
  - **Official information sent from ITU** to focal points in member states
    - This is good, but not enough to inform all interested parties
  - **Email marketing** is the fundamental mean, sending information to interested parties
    - Having in mind potential interest of the contacts
  - **Web-based marketing** for ITU elearning courses
    - Information on ITU Academy web site attracts students globally, since elearning courses are open (and should be open) to all interested parties
    - Information about the course on other web sites (e.g., web sites of the institution which holds the training)
  - **Other types** of marketing
    - Marketing can be also provided via brochures, social networks, etc.





# Key strategy for success of ITU CoE: Operational business plan the ITU CoE courses

- The CoE courses are **self-sustainable**:
  - All revenues comes from the collected course fees.
- The **operational business plan** for CoE courses are based on:
  - 150 USD/participant for ITU CoE elearning course
  - 500 USD/participant for ITU CoE face-to-face course
  - The course fees are based on revenue split 20:80 between ITU and CoE (based on practices in previous ITU CoE cycle)
  - Revenues are collected by the ITU, because ITU is the globally trusted party for all course participants, and 80% of the collected fees are transferred to the CoE after the course.
  - ITU Academy platform has established tools for:
    - Online payments (with credit cards),
    - Offline payments (with automatic invoicing).





# Who needs to do what for the ITU CoE course success?

- ITU and Academia (Professors/Instructors/Experts) need:
  - To provide **excellence of the training** (including organization, creation, coordination, delivery)
  - To provide diversity of ITU Academy trainings
    - For **capacity building of all ages**, with focus to ICT professionals
  - To deliver information about a given ITU course to different parties (that is the course marketing)
  - To **complement university level education** on long terms
    - This is crucial for the success.
- ITU Academy as a single web-based platform needs:
  - To maintain **high reliability** (e.g., administrators' work)
  - To continue with the online and offline (with invoices) **payments** for course enrolments
  - To continue all **different tools** for courses delivery.



# Summary

- ITU CoE at FEEIT in Skopje aims to continue further its successful delivery of **ITU training courses provided over past 10 years (2009-2018)** in two consecutive cycles, 2009-2014 and 2015-2018.
- It has **successfully delivered many e-learning courses** in the broadband access priority area via the ITU's platform ITU Academy.
  - The ITU Academy is an online self-learning e-learning platform, to be used for all ITU trainings.
- In **2019-2022 cycle** of ITU CoE activities FEEIT has been selected for the priority area of “**Wireless and Fixed Broadband Access**”.
- The distance learning courses held by the ITU CoE at FEEIT have proven to be **self-sustainable and very interesting** for the targeted audience worldwide, hence ITU CoE at FEEIT believes that it is able to continue such practice in 2019-2022 cycle of CoE activities.



# Thank you!