IoT Academy

ITU Centre of Excellence in the Asia and the Pacific

Training Courses Program

2020-2021

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Chairman & Founder

IMPLEMENTATION PER COE 2019/2020

IOT Academy

Year	CoE	Courses planned	Delivery mode	Original dates	Final dates	Status	Number of participants registered	Number of participants certified	End-of training reports
2019	IOT Academy	IOT Security Challenges and Solutions	online	26AUG-06SEP19	26AUG-06SEP19	implemented	59	49	received
2019	IOT Academy	Building IOT Solutions for Energy and Water Resource Management	online	16-27DEC19	16-27DEC19	implemented	42	37	received
2020	IoT Academy	Digital Transformation: Enhancing IoT-Driven Accessibility	online	11-17APR20	11-17MAY20	implemented	281	130	received
2020	IoT Academy	Building IoT Solutions for Smart Sustainable Cities	online	15-19AUG20	28SEP-09OCT20	implemented	37	31	received
2020	IoT Academy	Developing Internet of things Ecosystem	online	Nov-20	2-13NOV20	implemented	32	27	received

IoT Academy Training Courses in 2020

01

11 May - 17 May 2020

Digital Transformation: Enhancing IoT-Driven Accessibility for PWD

02

28 September – 9 October 2020

Building IoT Solutions for Smart Sustainable Cities

03

2 November – 13 November 2020

Developing Internet of Things Ecosystem

01

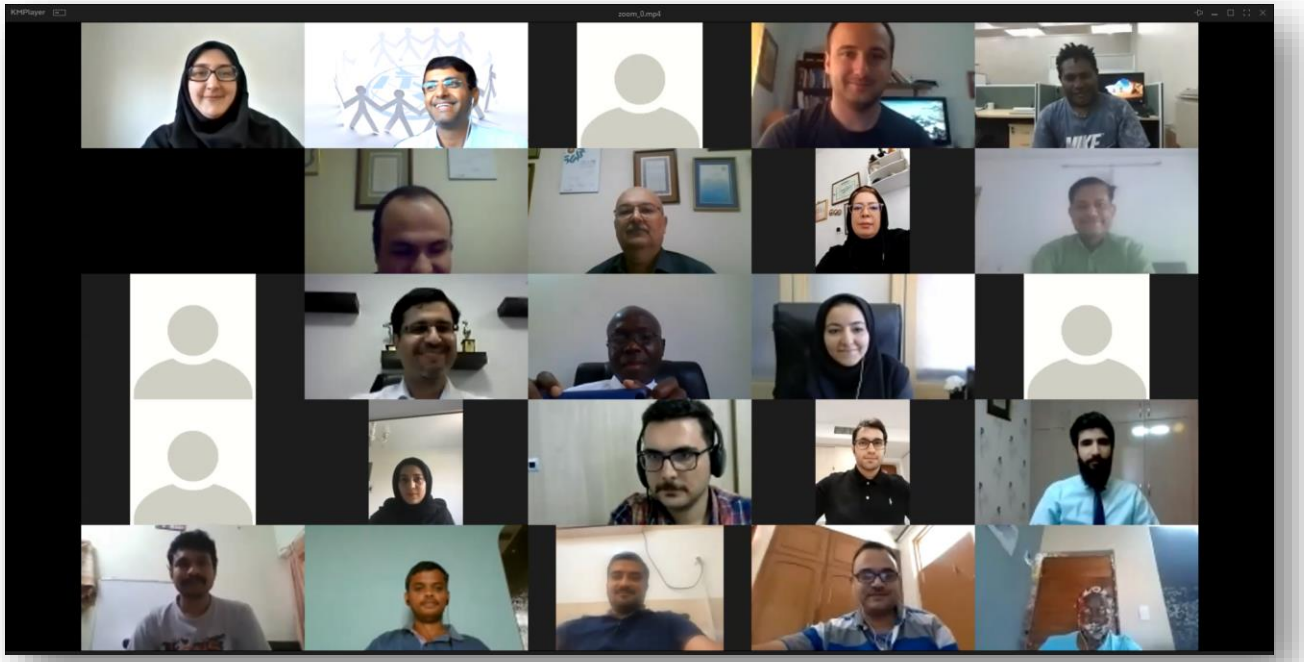
11 May - 17 May 2020

Digital Transformation: Enhancing IoT-Driven Accessibility for PWD

Training Course Structure

Digital transformation is intended to empower all people by providing opportunities offered by ICTs, such as IoT, to create a more inclusive digital society. This course is jointly organized by ITU, IoT Academy & ICT Research Institute and aims to equip participants with the knowledge on the role of digital transformation in realizing IoT-driven accessibilities for Persons with Disabilities (PWD) through the use of enabling technologies and assistive tools.

Online Chat Session



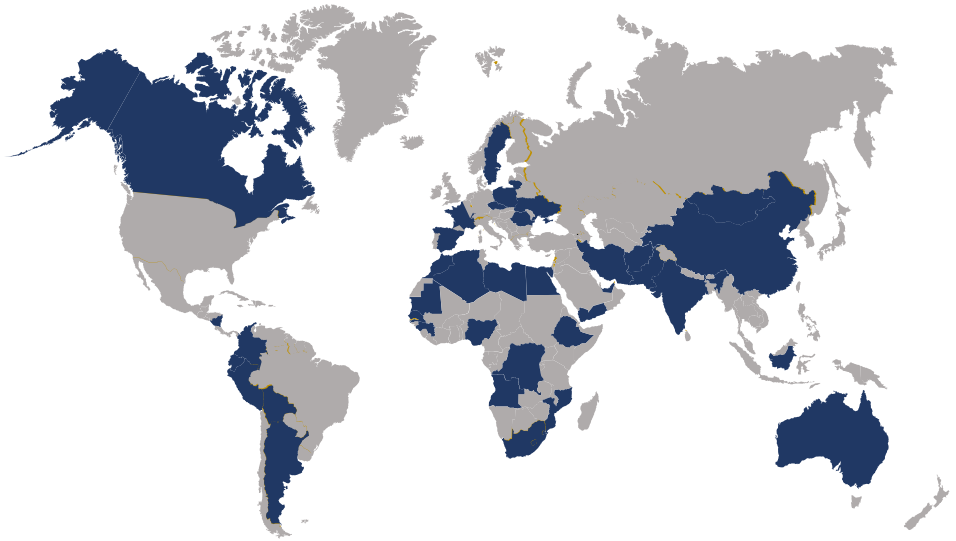
01

11 May - 17 May 2020

Digital Transformation: Enhancing IoT-Driven Accessibility for PWD

Geographical Scope of Participants

281 Participants from **54 countries** have registered for the course



Albania	China	Grenada	Mauritius	Qatar	Syria
Angola	Colombia	Haiti	Myanmar	Romania	Tanzania
Australia	Costa Rica	India	Nepal	Samoa	Thailand
Bangladesh	Cuba	Indonesia	Niger	Solomon Is.	Trinidad & Tobago
Belgium	Ecuador	Iran	Nigeria	Somalia	United Kingdom
Bolivia	Egypt	Italy	Norway	South Africa	United States
Brazil	France	Kenya	Pakistan	Spain	Yemen
Cameroon	Ghana	Kuwait	Panama	Sri Lanka	Zambia
Chile	Greece	Malaysia	Philippines	Sudan	Zimbabwe

- Number of participants: 281
- Number of active participants: 139
- **Number of participants that successfully completed the training: 130**
- Number of participants that registered the course but did not login to the course at all: 54
- Number of participants that failed the training: 151
- **Overal percentage of Pass: 46.27 %**
- Overal percentage of registered but did not login to the course at all: 19.2 %
- Overal percentage of fail: 53.73%

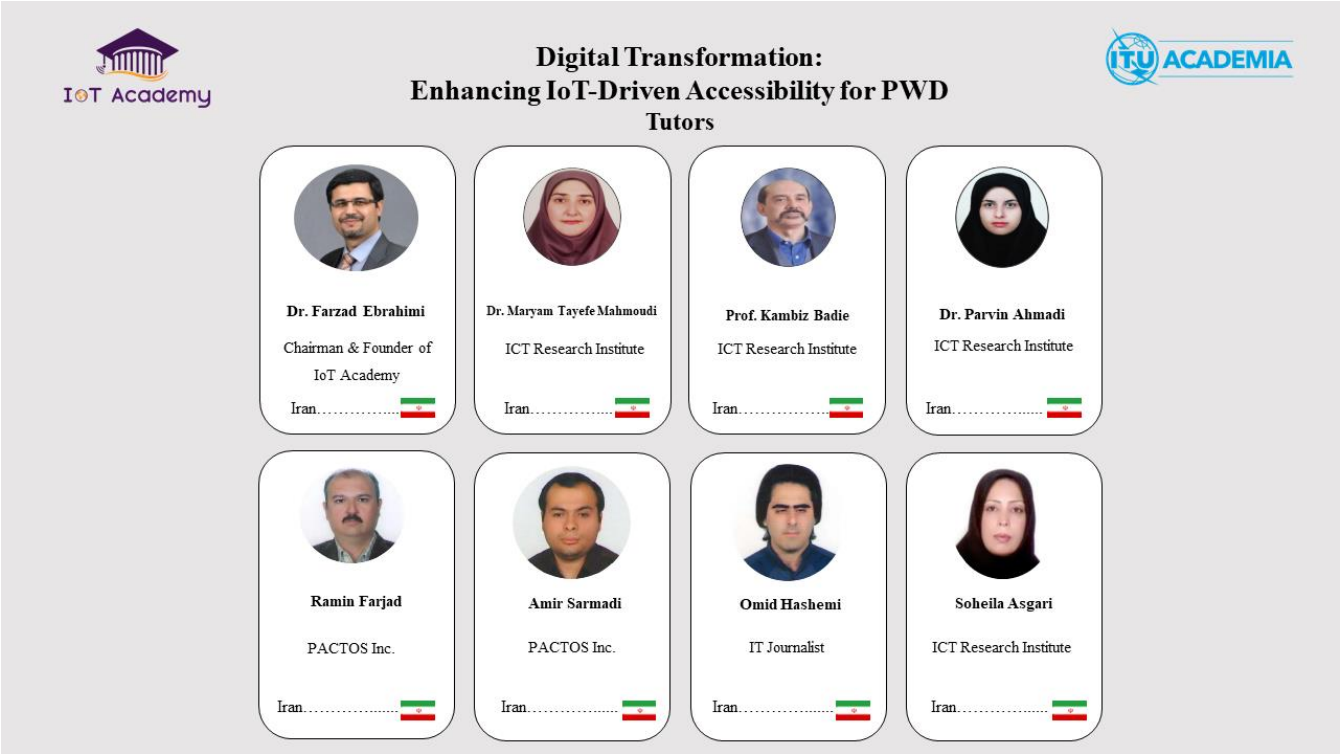
01

11 May - 17 May 2020

Digital Transformation: Enhancing IoT-Driven Accessibility for PWD

Tutors

International and national tutors from ICT Research Institute and Pactos In. (manufacturer of tools for people with disabilities) with a history of activities in the field of Internet of Things collaborated as tutors in this course.



02

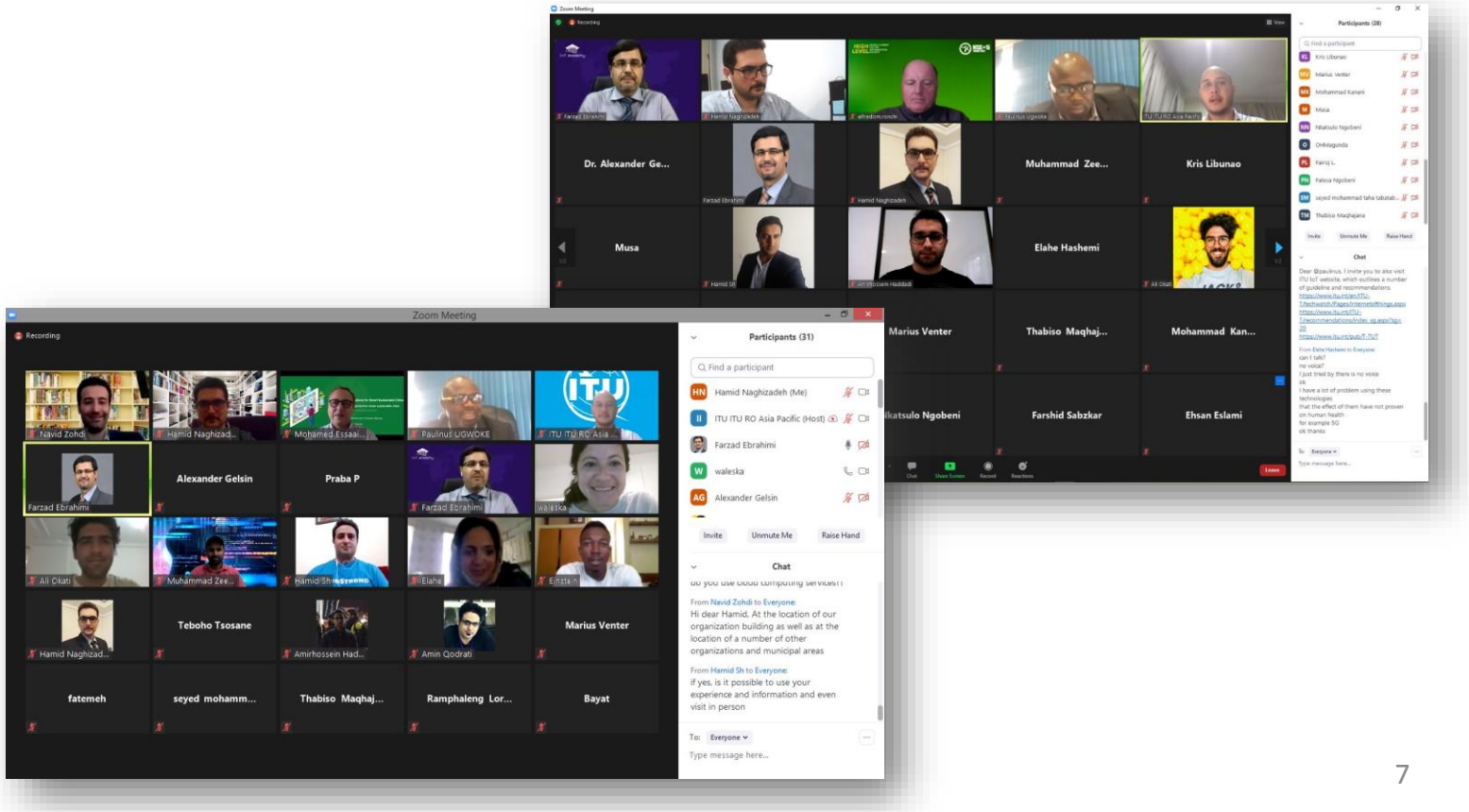
28 September – 9 October 2020

Building IoT Solutions for Smart Sustainable Cities

Training Course Structure

Smart and sustainable cities to support the Sustainable Development Goals is a priority agenda for governments. This course introduced participants to the concept and pillars of Internet of Things taking into account the work of ITU in the areas of Smart Sustainable City. Participants introduced to concepts, goals and frameworks to key aspects and KPIs of IoT based on different IoT solutions and use cases for Smart Sustainable City.

Online Chat Sessions



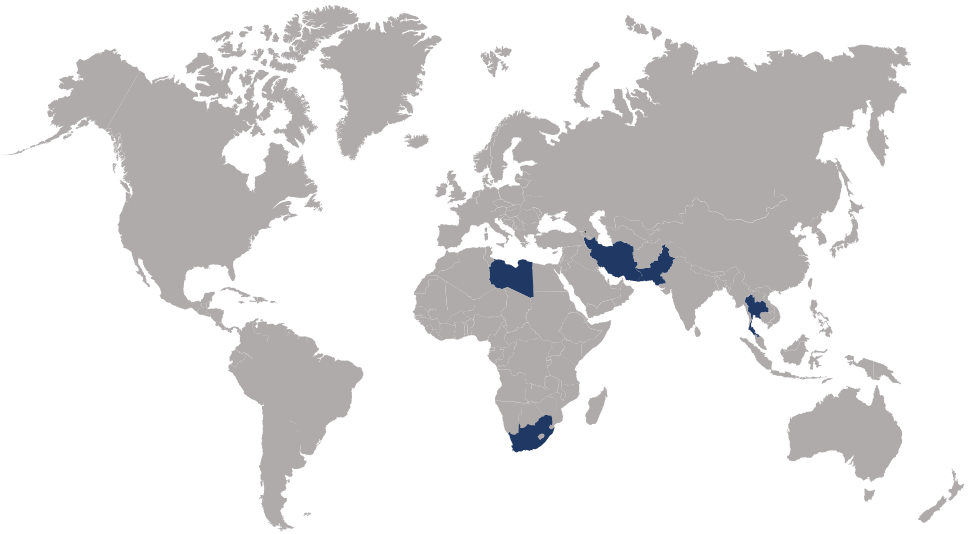
02

28 September – 9 October 2020

Building IoT Solutions for Smart Sustainable Cities

Geographical Scope of Participants

37 Participants from **five countries** have registered for the course



Iran	Nigeria
South Africa	Thailand
Pakistan	

- Number of participants: 37
- Number of active participants: 33
- **Number of participants that successfully completed the training: 31**
- Number of participants that registered the course but did not login to the course at all: 4
- Number of participants that failed the training: 6
- **Overal percentage of Pass: 83.78 %**
- Overal percentage of registered but did not login to the course at all: 10.81 %
- Overal percentage of fail: 16.21%

02

28 September – 9 October 2020

Building IoT Solutions for Smart Sustainable Cities

Tutors

International tutors from **eight countries** with a history of various activities in the field of Internet of Things and smart sustainable cities collaborated as tutors in this course.

03

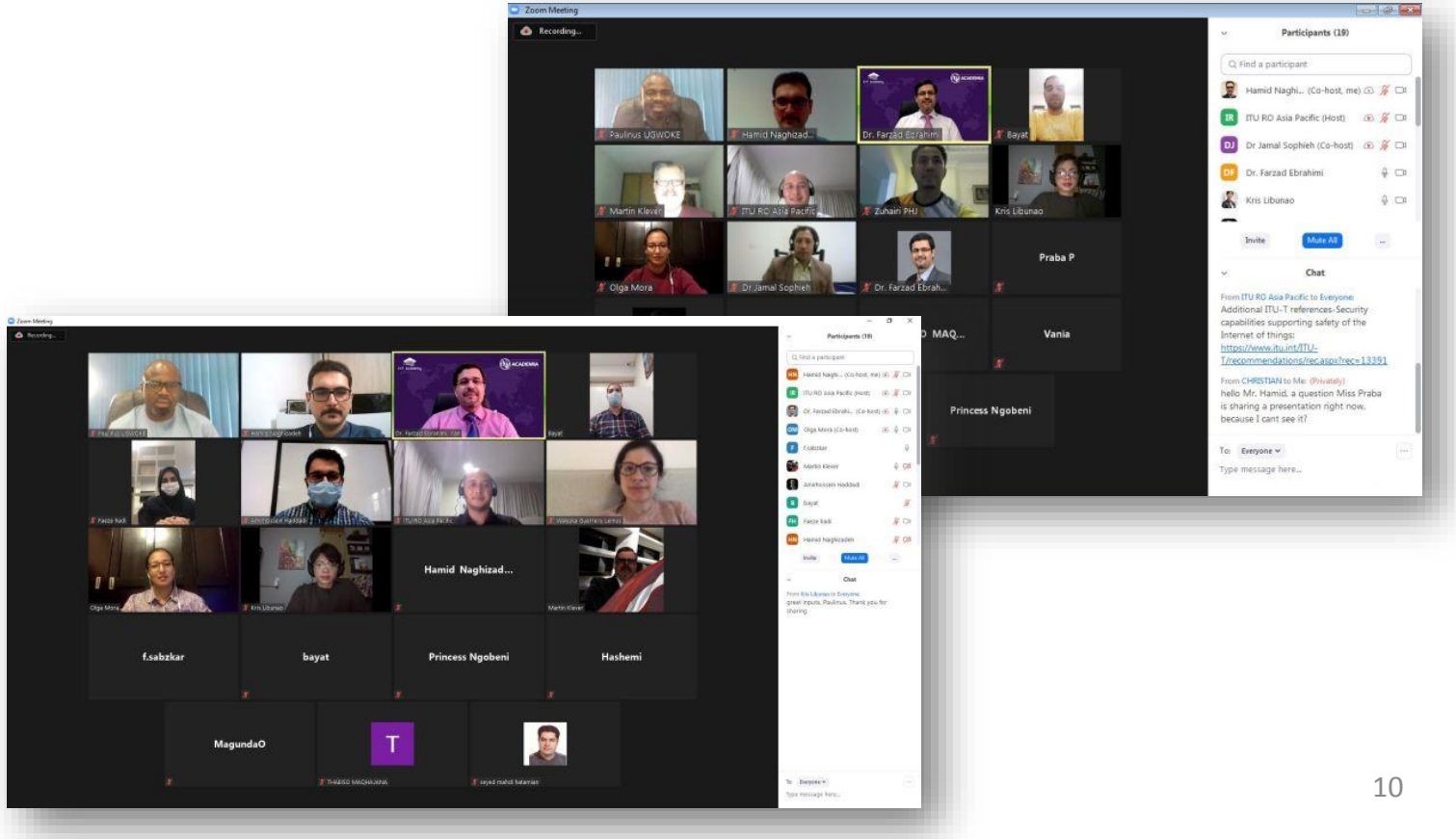
2 November – 13 November 2020

Developing Internet of Things Ecosystem

Training Course Structure

The Internet of Things will form a key component that will enable the 4th industrial revolution. This online training course aimed to introduce participants to the Internet of Things ecosystem and its key components including acquisition (Sensors & Actuators, embedded Systems, Gateways), network (Device Connectivity), IoT platform (Analytics, Dashboards & Tools, Services), and business (IoT Applications and Services, IoT Verticals, Marketplaces). The training took into account policies and regulations related to the Internet of Things and its security aspects. It specifically focused on some IoT verticals and covered all elements described above for them.

Online Chat Sessions



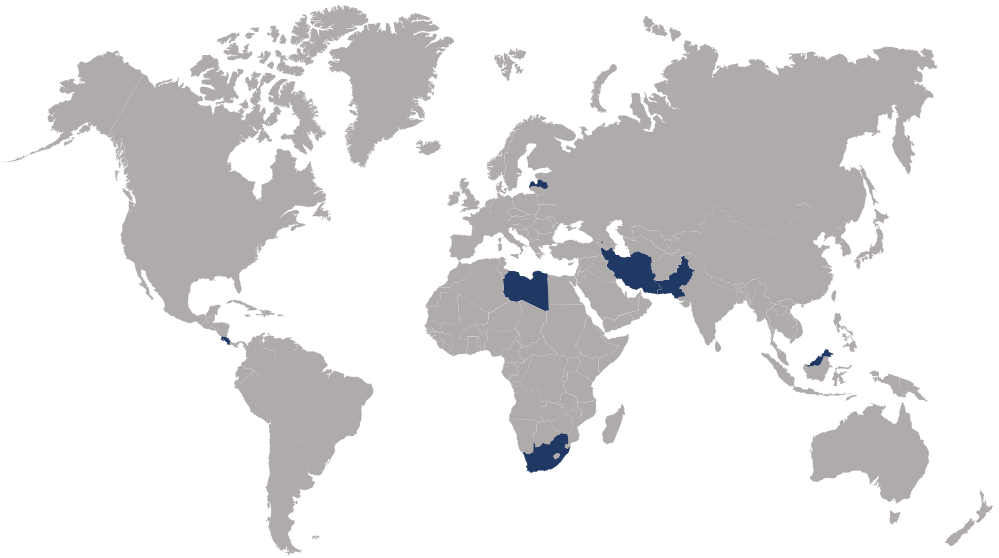
03

2 November – 13 November 2020

Developing Internet of Things Ecosystem

Geographical Scope of Participants

32 Participants from seven countries have registered for the course



Iran	Costa Rica
South Africa	Latvia
Pakistan	Brunei
Nigeria	

- Number of participants: 32
- Number of active participants: 30
- **Number of participants that successfully completed the training: 27**
- Number of participants that registered the course but did not login to the course at all: 2
- Number of participants that failed the training: 5
- **Overal percentage of Pass: 84.38%**
- Overal percentage of registered but did not login to the course at all: 6.25%
- Overal percentage of fail: 15.62%

03

2 November – 13 November 2020

Developing Internet of Things Ecosystem

Tutors

International tutors from **six countries** with a history of various activities in the field of Internet of Things and collaborated as tutors in this course.

IoT Academy Training Courses Program 2021

01

Q2: 26 April – 7 May 2021

Developing IoT, Big Data and Blockchain Solutions for Smart Sustainable Cities

02

Q3: 23 August – 3 September 2021

Building IoT Solutions for Smart Agriculture

03

Q4: 8 November – 19 November 2021

Internet of Things concerns for Implementing Industry 4.0

01

Q2: 26 April – 7 May 2021

Developing IoT, Big Data and Blockchain Solutions for Smart Sustainable Cities

Training Course Structure

Two Weeks Online Training Course | 100 USD

Description:

Smart and sustainable cities to support sustainable development goals is a priority agenda for governments. This course aims to introduce participants to the concept and pillars of the Internet of Things taking into account the work of ITU in the areas of the smart sustainable city. Participants will be introduced to concepts, goals, and frameworks to key aspects and KPIs of IoT and related technology solutions and services such as Big Data and Blockchain area and some use cases for the smart sustainable city (SSC).

Audience:

Municipalities, organizations, industries, ICT experts, policymakers, regulators, service & solution providers and academia that are involved in the Internet of Things and smart city.

Trainers:

Experts from the IoT Academy and other invited international experts.

Learning Outcomes:

Upon completion of this training course, participants will be able to:

- identify different IoT concept, pillars, trend and the different IoT verticals related to smart cities;
- understand concepts, goals, and frameworks related to a smart sustainable city, including key aspects and KPIs required to develop smart sustainable cities;
- identify different IoT verticals such as smart grid, smart transportation, smart home, smart water, smart banking, and smart healthcare for smart sustainable city;
- identify big data solutions and strategies related to data such as open data and various data analytics services for SSC.
- identify Blockchain-based billing solutions and strategies related to cryptocurrencies and their concerns related to smart sustainable cities; and
- review the various case studies in the area of using emerging technologies in smart sustainable cities.

02

Q3: 23 August – 3 September 2021

Building IoT Solutions for Smart Agriculture

Training Course Structure

Two Weeks Online Training Course | 100 USD

Description:

The world population growth is increasing the demand for food production. Furthermore, the reduction of the workforce in rural areas and the increase in production costs are challenges for food production nowadays. Smart agriculture is a management concept focused on providing the agricultural industry with the infrastructure to leverage advanced technology especially the Internet of Things (IoT) – for tracking, monitoring, automating, and analyzing operations and realizing intelligent systems. This online training course aims to introduce participants to the Internet of Things and its abilities for enhancing and improving agricultural productivity and cost reduction. It will specifically focus on topics that address IoT usage for smart farming, smart water and energy management, and some use cases in this area.

Audience:

Ministries, organizations, industries, ICT experts, policymakers, regulators, service & solution providers and academia that are involved in the area of agriculture and Internet of Things.

Trainers:

Experts from the IoT Academy and other invited international experts.

Learning Outcomes:

Upon completion of this training course, participants will be able to:

- identify the IoT concept and its capabilities and applications for the agriculture industry;
- understand concepts, goals, and frameworks related to smart agriculture, including key aspects required to develop smart agriculture;
- identify different IoT verticals such as smart transportation, smart water resource management, smart warehousing for smart agriculture; and
- review the various case studies in the area of using IoT solutions and services in the smart agriculture area.

03

Q4: 8 November – 19 November 2021

Internet of Things concerns for Implementing Industry 4.0

Training Course Structure

Two Weeks Online Training Course | 100 USD

Description:

Due to successive technological advancements, developments, and innovations, the global industrial landscape has drastically transformed over the last years. The fourth industrial revolution (Industry 4.0) aims at transforming previous generation's industries into intelligent ones by incorporating IoT as innovative technology. Internet of Things (IoT) is a rapidly growing concept that has dramatically contributed to the Industry 4.0 realization. This online training course aims to introduce participants to the Internet of Things and Industry 4.0 concept and IoT abilities for enhancing and improving productivity and cost reduction in industries. It will specifically focus on topics that address intelligent systems and their usage for industry 4.0 and some use cases in this area.

Audience:

Industries, organizations, ICT experts, policymakers, regulators, service & solution providers and academia that are involved in the Internet of Things and Industry 4.0.

Trainers:

Experts from the IoT Academy and other invited international experts.

Learning Outcomes:

Upon completion of this training course, participants will be able to:

- identify the Internet of Things and Industry 4.0 concept, trend and IoT capabilities for enhancing industries productivity;
- understand concepts, goals, and frameworks related to Industry 4.0, including key aspects required to develop smart and intelligent systems;
- identify different IoT and related technology applications for realizing industry 4.0; and
- review the various case studies in the area of using IoT solutions and services in this area.

Suggestions, Considerations and Lessons Learned

1. It is better to export final report and annex 2 directly from ITU Academy platform, instead of completing separately.
2. It will be very good if ITU get certificate to tutors also.
3. Boosting better marketing strategies by both parties can help attract more active audience.
4. According to the participants' feedback, the recorded video file of the tutors' presentation should also be included in the training package.
5. In free courses, a large number of people only register but do not participate in the course and a number of others do not participate actively in the course. In total, half of the participants were not active in the course despite repeated notifications to the participants. Resolving this issue requires consensus and solutions.

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