ITU Regional Training Course on Certified IoT Fundamental (CIoTF)

Khartoum-Sudan, 02-03 November 2022

TRAINING OUTLINE

COURSE DESCRIPTION

Title	**ITU Regional Training Course on Certified IoT Fundamental (CIoTF)**
Modality	Physical
Dates	**2-3 November 2022**
Duration	2 Days
Registration deadline	29 Oct. 2022
Training fees	Free
Description	The Internet of Things (IoT) Fundamental training course provides an overview and insight into the emerging technology. The course covers the basic concepts, terminology, and key components of IoT. It explains the business perspectives of IoT including the advantages of early adoption and monetization models. It further expands on the technologies enabling IoT and the various challenges to expect. Several scenarios describe the use cases and applications of IoT that result in smart applications and services to inspire organizations making the move to IoT. The course provides future insights in IoT and forecasts the status of the connected world in 2030.

1. LEARNING OBJECTIVES

The Internet of Things (IoT) Fundamental training course provides an overview and insight into the emerging technology. The course covers the basic concepts, terminology, and key components of IoT.

2. LEARNING OUTCOMES

By the end of these training courses, the participants will be able to understand:

- Concepts and Terminologies IoT
- Basic building block of IoT architecture

- IoT challenges and security issue
- IoT case studies and future predictions
- IoT Hardware and Software Platforms
- Have hands-on Lab on IoT uses cases

3. TARGET POPULATION

The CIoTF course is designed for network designers, networking consultants, IT managers, business analyst, applications specialists, IoT program / project Manager and IT directors.

4. ENTRY REQUIREMENTS

It is expected that applicants/participants will have a basic knowledge of Internet concepts (Difference between Internet and Web, URL, Http/Https, DNS, etc.), Networking concepts (LAN/WAN/MAN, routers, protocols, topologies, etc.), programming devices using C / C++ / Python, as well as knowledge of computer fundamentals.

5. TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)
1. Eng. Sara Mohammed Saram.abdalrahim@gmail.com 2. Eng. Hiba Almin Hiba.alamin@gmail.com

3. TRAINING COURSE CONTENTS

1. Concepts and Terminologies
2. Basic Building Block of IoT –Architecture
3. IoT challenges and security issue
4. IoT Case Studies and Future Predictions
5. IoT Hardware and Software Platforms
6. Hands-on Lab

7. TRAINING COURSE SCHEDULE

Session	**Topic**	**Exercises and interactions**
Day 1 /Session 1	▪ Concepts and Terminologies ▪ Basic Building Block of IoT – Architecture ▪ IoT challenges and security issue	Discussions
Day 1 /Session 2	▪ IoT Case Studies and Future Predictions ▪ IoT Hardware and Software Platforms	- setup IoT hardware and software

Day 2/Session 1	Practical Lab	- configure IoT hardware and software - Write code for IoT watering plant System
Day 2/Session 2	Exam	Online Exam

8. METHODOLOGY (Didactic approach)

- This class covers both theoretical and practical knowledge.
- The training would involve both theory and practical led by the instructor.
- The practical classes are conducted in a laboratory environment.
- The participants will have hands on experience using the actual equipment.
- Quizzes will have conducted during the class to test the knowledge of participants about a particular subtopic.
- Professional examination both theoretical and practical will be conducted to test the participant's knowledge towards end of the class.
- All the participants that passed the examination will be awarded 2 certificates as follows:
  1. Free Training certificate signed by ITU and TPRA and according to ITU training certificate
  2. Paid Professional certificate that endorsed by Global IPv6 Forum

9. EVALUATION AND GRADING

Participants' performance in this training will be determined using a combination of grades for the participation sessions discussions and self-assessment quizzes.
Where:

- Participation in the sessions will be awarded 10 per cent.
- Self-Assessments quizzes will be worth 20 per cent of the final grade of the training.
- Final examination for professional certificate to become CNE6 will be worth 70 per cent of the final grade of the training.

Please note that total score higher than 60% is required to obtain the ITU and TPRA-Sudan training certificate.

10. TRAINING COORDINATION

Host Coordinator:	**ITU Coordinator:**
Eng. Ahmed Atyya Numbering Manager, at TPRA, Email: (ahmed.atyya@tpra.gov.sd)	**Eng. Mustafa Al Mahdi** Programme Officer ITU Arab Regional Office Email: mustafa.almahdi@itu.int

11. REGISTRATION

You can register for the course online at the following link: Registration (itu.int)