



**ITU Centres of Excellence Network for Asia-Pacific
IoT Academy**

Online Training Course on

“Internet of Things concerns for Implementing Industry 4.0”

8 – 19 November 2021

TRAINING COURSE OUTLINE

COURSE DESCRIPTION

Title	Internet of Things concerns for Implementing Industry 4.0
Objectives	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.
Dates	8 – 19 November 2021
Duration	12 Days
Registration deadline	5 November 2021
Training fees	USD 100
Course code	210I27751ASP-E

DESCRIPTION OF THE TRAINING COURSE

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.

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.

TARGET POPULATION

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

ENTRY REQUIREMENTS

Those interested in the field of Internet of Things, industry, industry 4.0, etc. can participate in this training course.

TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Farzad Ebrahimi	ebrahimi@iotacademy.ir
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TRAINING COURSE CONTENTS

- **Week 1-1** Internet of Things concept and pillars
- **Week 1-2** IoT trend and verticals related to Industry 4.0
- **Week 1-3** Industry 4.0 concept and goals
- **Week 1-4** Industry 4.0 to overcome Covid-19 challenges
- **Week 1-5** Security considerations for implementing Industry 4.0
- **Week 2-1** Industry 4.0 realization by IoT in the oil and gas industries

- **Week 2-2** Industry 4.0 case studies – Smart Oil and Gas
- **Week 2-3** Industry 4.0 case studies – Smart Agriculture
- **Week 2-4** Industry 4.0 case studies – Smart Grid
- **Week 2-5** Industry 4.0 case studies – Nigeria Experiences

TRAINING COURSE SCHEDULE

Week	Topic	Exercises and interactions
Week 1	<ul style="list-style-type: none"> - Internet of Things concept and pillars - IoT trend and verticals related to Industry 4.0 - Industry 4.0 concept and goals - Industry 4.0 to overcome Covid-19 challenges - Security considerations for implementing Industry 4.0 	<p><u>This week, each participant has to:</u></p> <ul style="list-style-type: none"> - Read of the PDF slides uploaded in the course page for week 1 - Post their questions or ideas to the discussion forum - Attend a live zoom session scheduled for Saturday - 14:00hrs-15:00hrs (GMT+4.30) - Complete a self-test quiz 1 <p>Note: Participants should pay attention to the course announcements they receive in their panel and email.</p>
Week 2	<ul style="list-style-type: none"> - Industry 4.0 realization by IoT in the oil and gas industries - Industry 4.0 case studies – Smart Oil and Gas - Industry 4.0 case studies – Smart Agriculture - Industry 4.0 case studies – Smart Grid - Industry 4.0 case studies – Nigeria Experiences 	<p><u>This week, each participant has to:</u></p> <ul style="list-style-type: none"> - Read of the PDF slides uploaded in the course page for week 2 - Post their questions or ideas to the discussion forum - Attend a live zoom session scheduled for Wednesday - 14:00hrs-15:00hrs (GMT+4.30) - Upload an assignment in the course panel that considered by the tutors - Complete a self-test quiz 2 <p>Note: Participants should pay attention to the course announcements they receive in their panel and email.</p>

METHODOLOGY (Didactic approach)

Course Materials: The relevant course material will be made available on the website.

Online Discussion Forums: Participants are expected to participate actively in discussion forums on selected topics throughout the week.

Chat Sessions: Online chat sessions with the tutors will take place Saturday and Wednesday from 14:00– 15:00 Hrs. Iran Time (GMT+4.30). All participants are expected to join the chat sessions as they will be graded.

Quizzes: Two mandatory online quiz will be held at the end of each week.

Assignment: There will be a mandatory assignment for the course.

EVALUATION AND GRADING

Besides the tests and their assignment score, participants will be evaluated according to their substantive posts on the discussion forum, active participation in the online chat sessions and other course activities, reflecting both the quantity and quality of time spent on the course. The evaluation details and criteria for certificates is as follows.

Quiz #1:	30%
Quiz #2	30%
Individual Assignment:	20%
2 Chat Sessions (5% per session)	10%
2 Discussion Forum (5% per forum)	10%
Total Evaluation:	100%

IMPORTANT: A PASSING MARK OF 60% IS REQUIRED FOR OBTAINING A COMPLETION CERTIFICATE.

TRAINING COURSE COORDINATION

Course coordinator: Name: Mr. Hamid Naghizadeh Email address: edu@iotaci.com	ITU coordinator: Name: Mr. Sean Doral Email address: sean.doral@itu.int
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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/user/register>

Training course 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/internet-things-concerns-implementing-industry-40-0>

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

Please note that online registration should be done before 23 April 2021

Payment

1. On-line Payment

A training fee of USD 100 per participant is applied for this training. Payment should be made via the online system using the link mentioned above for training registration at <https://academy.itu.int/training-courses/full-catalogue/internet-things-concerns-implementing-industry-40-0>

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 100
Payment Reference:	21OI27751ASP-E-P.40593.1.08

4. Other method of payment

For local participants, who would like to pay in local currency, please contact Mr. Hamid Naghizadeh (edu@iotaci.com) the IoT Academy coordinator for further assistance.