



ITU Centres of Excellence Network for Asia-Pacific
China Academy of Information and Communications Technology

Online Training Course on

Basic Knowledge and Application of 5G and AI

19-30 April 2021

TRAINING COURSE OUTLINE

COURSE DESCRIPTION

Title	Basic Knowledge and Application of 5G and AI
Objectives	- To build knowledge about 5G definition and evolution, 5G protocol standardization and progress and 5G key technologies to enhance the strategic understanding of participants on 5G and its application. - To build knowledge about AI and its applications in Smart City, autonomous driving, virtual assistant, etc.
Dates	19-30 April 2021
Duration	2 Weeks
Registration deadline	15 April 2021
Training fees	Free
Course code	21OI26516ASP-E

DESCRIPTION OF THE TRAINING COURSE

The course will cover the basic knowledge of 5G and AI, such as the basic conceptions, network evolution and key technologies. And the course also will include application scenarios across different sectors, such as healthcare, smart city, security and live broadcast, etc.

LEARNING OUTCOMES

The course is expected to achieve the following outcomes:

- Understand the IMT2020 (5G) technology and application;
- Build knowledge about key technology and applications in 5G;
- Acquire knowledge on AI and its application scenarios across different sectors; and
- Increase the opportunities for international cooperation.

TARGET POPULATION

The course is targeted ICT professionals and engineers, decision makers, managers, equipment suppliers and operators interested in learning about ICT applications in 5G and AI. Other institutions and individuals that are seeking to understand and exploit the benefits of 5G and AI and related ICT applications are also welcome to participate.

ENTRY REQUIREMENTS

The participants are expected to have basic knowledge of ICT.

TUTORS/INSTRUCTORS

Experts from CAICT, Huawei and other partners.

TRAINING COURSE CONTENTS

5G Basic Knowledge

- Origin of 5G
- 5G Industry Progress
- 5G Network Challenges
- 5G Network Transformation

5G Industry Application

- 5G Service Transformation
- 5G Industry Application-Live Broadcast
- 5G Smart Power Grid
- 5G Smart Healthcare
- 5G Industry Application-Security
- 5G Smart City
- 5G Business

Reveal the Mysterious of AI

- What is AI?
- How can AI be applied in companies?
- What is Machine Learning/ Deep Learning?
- AI and its future
- Summary

AI : A Brief Introduction

- Introduction to Neural Networks
- Concepts of Convolutional Neural Network
- Typical CNN Models

Basic Knowledge of Artificial Intelligence

- AI Technical Architecture
- Development&Application In Carriers
- Intelligent O&M
- Smart city
- Autonomous driving
- Virtual assistant

Commercialization of Artificial Intelligence

- Challenges in Port Industry
- Technology Transformation
- Westwell's solution

TRAINING COURSE SCHEDULE

Week / Session	Topic	Exercises and interactions
Week 1	5G Basic Knowledge and Industry Application	Quiz will be provided to evaluate the learning effects of participants, and tutors will be online to respond any questions raised by participants.
Week 2	Basic Knowledge of Artificial Intelligence and its Commercialization	Quiz will be provided to evaluate the learning effects of participants, and tutors will be online to respond any questions raised by participants.

METHODOLOGY (Didactic approach)

Course Materials: The relevant course material will be made available on the website, which will include presentations, practical cases introduction, etc.

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 Tutor will take place on Wednesday from 14:00 – 15:00 Hrs. Beijing Time (GMT +8). All participants are expected to join the chat sessions to interact with tutors.

Quizzes: 2 mandatory online quizzes will be held at the end of each week of the course

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 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.

Quiz1:	30%
Quiz2	30%
Individual Assignment	20%
Discussion Forum1	10%
Discussion Forum2	10%
Total Evaluation:	100%

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

TRAINING COURSE COORDINATION

Course coordinator: Name:WANG Ying Email address: wangying@caict.ac.cn Name:ZHANG Ran Email address:zhangran1@caict.ac.cn	ITU coordinator: Name:Sean Sharidz Doral Email address:sean.doral@itu.int
--	--

REGISTRATION

ITU Academy portal account

Registration 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 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/basic-knowledge-and-application-5g-and-ai>

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