National Information Society Agency (NIA)

Online Training Course on

INTELLIGENT GOVERNMENT BASED ON AI
1 – 28 September 2021

TRAINING COURSE OUTLINE

COURSE DESCRIPTION

Title	Intelligent Government Based on AI -Focusing on intelligent services in Korea
Objectives	To develop the capacity to plan and apply public government services using AI
Dates	1 – 28 September 2021
Duration	4 weeks
Registration deadline	31 August 2021
Training fees	Free
Course code	21OI26617ASP-E

DESCRIPTION OF THE TRAINING COURSE

This course covers the basic concepts and characteristics of AI (artificial intelligence). The course contents include concept and history of AI, impact on AI on public administration, and guidelines for the introduction of AI to the public sector. In addition, AI policies and intelligent public service cases of AI-leading countries are introduced. This course also covers topics to consider for effective application of AI technology on public service.

LEARNING OUTCOMES

Upon completion of this course, participants will be able to

- Understand the concept and history of artificial intelligence
- Understand AI policies and cases of selected countries
- Strengthen policymaking capacity by understanding the impact of AI on public administration
- Build change management skills by understanding the issues and countermeasures related to application of AI to the public service

TARGET POPULATION

The target audience for this course would be government officials and experts in the public administration, digital government, and ICT fields.

ENTRY REQUIREMENTS

There are no specific requirements to participate in this course.

TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Ms.Heeheun LEE	coe_nia@nia.or.kr

TRAINING COURSE CONTENTS

The topics covered in this course are

	Module	Content
1	**Understanding of AI and Applying AI to Public Services**	1-1. Concept and History of AI
		1-2. The Impact of Artificial Intelligence Technology on Public Administration
2	**AI Policies of AI-leading Countries**	2-1. AI Policies in Korea
		2-2. AI Policies in Selected Countries
3	**Intelligent Public Service Cases of AI-leading Countries**	3-1. Intelligent Public Service Cases in Korea
		3-2. Intelligent Public Service Cases in Major Countries
4	**Key issues and countermeasures when introducing AI to public services**	4-1. AI Ethics
		4-2. AI Regulation
		4-3. Digital Divide & AI
		4-4. Data Governance and Data Sovereignty
		4-5. Policy Issues of Nurturing AI Talents and Specialists
		4-6. Guidelines for the Introduction of AI to the public sector

1. **Understanding of AI and Applying AI to Public Services**
   - Review of the brief history of artificial intelligence (AI) to define and understand various AI terms. After figuring out how AI algorithms are classified, we seek to understand the characteristics and differences of each AI algorithm. After examining learning methods and models with a focus on machine learning, we identify ideas about successful use of AI.
   - Review the changes following the introduction of artificial intelligence in the public sector. After the review of paradigm shift with the development of technologies and factors influencing the changes after implementing AI in public administration, it is discussed what the role of government and organizational strategies should be.

2. **AI Policies of AI-leading Countries**
   - Introduction of AI-related national policies in Korea. Among various recent national initiatives driven by the Korean government, the chapter focuses on the National AI Strategy and the Digital New Deal. These two initiatives include many efforts to foster the AI ecosystem, enhance competitiveness, and successfully lead AI-based digital transformation.
   - Review of AI strategies and policies in selected countries, which are leading the introduction of AI to the public administration. It will provide an overview of AI strategies and policies of the United States of America, Singapore, United Kingdom, Estonia, China, and EU.

3. **Intelligent Public Service Cases of AI-leading Countries**
   - Introduction of five public service cases using artificial intelligence in Korea. These cases include intelligent human resource recommendation, monitoring of state- and public-owned lands, city administration monitoring (Salpiso in Korean), prediction and management of underground environment pollution, and electric fire prevention and early alarm system. The participants in the course are expected to learn about how government organizations harness artificial intelligence from those five cases.
   - Introduction of AI cases related to the public administration in the leading countries. The cases using AI in public services, transportation, weather, jurisdiction are reviewed. Through the case studies, students can understand how AI is used and have some ideas about using AI in public administration

4. **Key issues and countermeasures when introducing AI to public services**
   - The usefulness and dysfunction of AI and find out why case-specific AI ethics is necessary. After examining how existing Internet ethics has been derived, we will explore general approaches to derive new AI ethics in line with global trends. By examining AI ethics cases in Korea, we can understand the basic principles of AI ethics and establish specific ethical guidelines on various subjects of AI society.
   - Introduction to global legal efforts that has been made to prevent side effects and dysfunction of AI-based deepfake apps, centred around relevant laws in the US and Korea. In April 2021, the European Committee proposed the world's first regulation on AI, in which AI systems are classified into three categories based on their risk levels. This AI regulation stipulates various legal matters, including penalties and preventive measures, with a focus on high-risk AI systems.
   - How AI can affect the digital divide. In this era of digital transformation led by AI and information and communication technologies (ICTs), we seek to examine a national solution to bridge the digital divide by introducing a new policy called digital inclusion. To this end, we first explore the concept of the digital divide and then look at digital inclusion policies in Korea.
   - Issues of data governance and data sovereignty. Participants in the course will understand the working definition, goals, benefits, and relevance of data governance. They will also discuss the rising importance of data sovereignty in the age of artificial intelligence.

- Policy issues related to nurturing AI talents and specialists. While AI talents and specialists are concentrated in some countries, others need to create national policies for AI education that can be applied to their situation and environment.
- Review on what should be considered before AI is used in public administration. It is reviewed that elements in each stage of the AI introduction and the reason why they are considered. The concept, checklists, and things to consider of every element are also reviewed.

TRAINING COURSE SCHEDULE

Week / Session	Topic	Exercises and interactions
Week 1	**Topic 1** Understanding of AI and Applying AI to Public Services	This week, each participant has to: • (Lecture) Study a prerecorded lecture video in the course page • (Course materials) Read the PPT slides uploaded on the course page for week 1 • (Discussion forum) Post his/her opinions on the discussion forum topic and respond to opinions suggested by other participants in the discussion • (Quiz) Complete a quiz for topic 1 **Week 1 Forum Topic**: TBD
Week 2	**Topic 2** AI Policies of AI-leading Countries	This week, each participant has to • (Lecture) Study a prerecorded lecture video on the course page • (Course materials) Read the PPT slides uploaded on the course page for week 2 • (Discussion forum) Post his/her opinions on the discussion forum topic and respond to opinions suggested by other participants in the discussion • (Quiz) Complete a quiz for topic 2 **Week 2 Forum Topic**: TBD
Week 3	Intelligent Public Service Cases of AI-leading Countries	This week, each participant has to • (Lecture) Study a prerecorded lecture video on the course page

		(Course materials) Read the PPT slides uploaded on the course page for week 3 (Discussion forum) Post his/her opinions on the discussion forum topic and respond to opinions suggested by other participants in the discussion (Quiz) Complete a quiz for topic 3 Week 3 Forum Topic: TBD
Week 4	**Topic 4** Key issues and countermeasures when introducing AI to public services	This week, each participant has to (Lecture) Study a prerecorded lecture video on the course page (Course materials) Read the PPT slides uploaded on the course page for week 3 (Discussion forum) Post his/her opinions on the discussion forum topic and respond to opinions suggested by other participants in the discussion (Quiz) Complete a quiz for topic 4 Week 4 Forum Topic: TBD
	Individual **Assignment**	This week, each participant has to: Prepare a short essay about key issues and strategies for applying AI to public services

METHODOLOGY (Didactic approach)

This course will be delivered using instructor-led online learning. The course is delivered using power-point slides posted on the course page and selected reference materials that the participants have to study each week, participate in scheduled activities and undertake self-assessments. Students will reinforce their understanding of the topics studied by drawing on their specific environments and are encouraged to consult with experienced colleagues who are working on a relevant topic. The following methods will be used for this course

- Self-study of PPTs and reference materials
- Instructor led presentations made through YouTube
- Interactive forum discussions
- Quizzes
- Individual assignment

EVALUATION AND GRADING

Students performance in this course will be determined using a combination of grades for the participation in discussion forums, self-assessment quizzes, and the personal assignment. The evaluation details and criteria for certificates is as follows.

Quiz #1	15%
Quiz #2	15%
Quiz #3	15%
Quiz #4	15%
Individual Assignment	30%
Discussion Forums	10%
Total Evaluation:	**100%**

Total Evaluation:	**100%**

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

TRAINING COURSE COORDINATION

Course coordinator:	ITU coordinator:
Name: Ms.Heeheun LEE Email address: coe_nia@nia.or.kr	Name: Ms. Sean Doral Email address: sean.doral@itu.int

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/intelligent-government-based-ai.

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

Payment

This course is being offered free of charge to participants with support from NIA. The participants (or their entities) will have to cover their own internet access costs for participation.