PROJECT IMPLEMENTATION PLAN

Ref. No. 20-IN-06-GE-DLN-A-AP02-PP2000008-003

PIP Issue Date	2 April 2020
Project Code	20-IN-06-GE-DLN-A-AP02
Title	Advanced Course on Data Analytics for the Public Sector
Reference	Project Notification (Revision 1) 20-IN-06-GE-DLN-A Self-learning e-Courses for the Industry and Service Sectors dated 24 March 2020
Timing and Duration	23 December 2020-31 December 2021 (374 days)
Venue	e-Learning
Implementing Organization(s)	APO Secretariat
Number of Participants	Minimum 400 participants
Self-registration	Self-registration opens from 10:00 AM Japan Standard Time on 23 December 2020 on the eAPO web portal: http://eAPO-tokyo.org Note: Participants can register directly from this portal on the APO website. Those who are already registered can access the course by using the assigned username and password. If you have forgotten your username and password, please refer to the help page on the home page of the portal.

1. Objectives

The objective of this course is to increase participants' understanding of data science skills relevant to the public sector. This course is intended to:

a. provide an intermediate understanding of data science and analytics;

b. introduce case studies of data analytic applications with a particular focus on use in the public sector;

c. enhance public policy and service delivery processes through the use of data analytic methods; and

d. explain the usefulness and scope for using and interpreting data science in the public sector.

2. Background

Decision-making in the public sector increasingly involves working with quantitative data, for example, in policy evaluation of programs. Data science allows analysts and policymakers to answer such questions as: 1) what are the effects of our policies on different groups; 2) how much will these policies cost; 3) can we predict whether this policy will be feasible; and 4) how does the public or target group view a particular policy or initiative? Recently, there has been a change in the importance of data and data analytics in the public sector because of an increase in the volume, variety, and velocity of data generated by digital technologies such as social media, search engines, cellphones, the Internet of Things, GIS and drones, CCTV cameras, satellites, and traffic sensors.

In keeping with those developments, the APO is organizing an advanced online course on data analytics for the public sector, aiming to expand the practical knowledge of public-sector employees and interested stakeholders in applying statistical knowledge and tools to public-sector challenges. This course will make participants comfortable in using data science approaches to aid decision-making, to interpret data, and to conduct some forms of statistical analysis.

3. Scope and Methodology

Scope
The course will cover the following modules:

Module 1: Introduction to Data Science for the Public Sector: Descriptive Statistics
Module 2: Measurement: Distributions, Samples, and Clustering
Module 3: Causality I: Randomized Controlled Trials
Module 4: Causality II: Observational Studies
Module 5: Prediction: Simple and Multivariate Regression Analyses
Module 6: Discovery: Textual, Network, and Spatial Data
Module 7: Uncertainty and Interpretation
Module 8: Data Visualization and Storytelling
Graded Exercises
Final Exam

Methodology
Module study, additional study material for participants, short quizzes for self-assessment, graded exercises, and a final exam to qualify for the APO e-certificate.

4. Qualifications of Candidates

The target groups are consultants, government officials, and stakeholders in public-sector initiatives who are interested in learning and applying data science approaches and interpreting data analytics for use in public policy and service delivery.

5. Eligibility for e-Certificate

A minimum score of 70% on the graded exercises is required to qualify for the APO e-certificate.

Dr. AKP Mochtan
Secretary-General