

## **COURSE DURATION**

15 hours (inclusive of 1-hour assessment)

## **COURSE SYNOPSIS**

This course is targeted towards those in the Transportation sector. We will cover all the technological advances in IT that is impacting or will impact the sector.

Learners will be able to understand and apply digital tools to provide innovative services to manage different modes of transport and traffic management and to perform analytics to create actionable insights from volumes of data better manage route planning and traffic management. Learners will be able to apply automation tools and mobile apps to use Digital Roadmap of the Land Transport Sector, digitalised operations, optimised resources and digital payments. Learners will also be able to identify cybersecurity risks associated with the Transportation sector and to mitigate the risks.

## **LEARNING OUTCOMES**

By the end of this course, learners will be able to:

- State the jobs and digital skills required in the current and future digital economy
- Describe the work requirements in a technology-rich environment and know the associated cybersecurity risks
- Identify various digital applications and tools in work applications, including widely applicable national and sectoral platforms
- Suggest how data and information can be used
- Perform functional outcomes such as the use of digital tools and software to access various learning paths and content
- Develop a post-course action plan to continue learning (i.e., to identify courses that would allow participants to further deepen their skills in the four key areas).

## **TRAINING METHODOLOGY**

- Interactive lecture
- Group discussion
- Hands-on activity
- Tech-enabled learning through Chatbots and Online Quiz

## **ASSUMED SKILLS**

- Learners must be able to read, write, speak and understand English at Secondary school level
  - Learners to have minimum GCE 'O' level or ITE certificate education
  - Learner should have at least 1 year's working experience in any industry
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- Learners must be able to operate a personal computer, use keyboard and mouse

## **COURSE CONTENT**

### **Learning Unit 1: Data Analytics**

- Introduction to SFDW
- Digital Skills and Jobs Awareness for the Transportation Sector
- Importance of Data Analytics in the current and future digital economy for the Transportation Sector
- Use data analytics and visualisation tools such as Excel PivotTable and Power BI to analyse transportation and travel data

### **Learning Unit 2: Automation**

- Introduction to Automation
- Programmable Automation (3D printing and additive manufacturing tools for fabrication of parts and customised items)
- Using Power Automate to improve office productivity, e.g. fleet management and scheduling
- Artificial Intelligence in transportation sector, e.g. predictive fleet maintenance
- Future trends for automation in the transportation workplace

### **Learning Unit 3: Cybersecurity Risk**

- Introduction to Cybersecurity Risk
- Areas of cybersecurity risk and its implication and effect to the individual and transportation sector
- How to mitigate cybersecurity risks? (physical, software, policy and regulatory)

### **Learning Unit 4: In-demand Digital Tools**

- Introduction to Industry 4.0
- Generative Artificial Intelligence such as ChatGPT in areas such as generating response to customer queries or complaints, route planning, training plan for drivers, etc.
- Conversational Automation, such as Google Assistant, chatbots in government and corporate websites, e.g. LTA, etc.
- Nationally launched applications
- Using VR and AR as well as autonomous road sweeper, driving simulators, etc.
- Enhancing productivity and efficiency with self-drive vehicles
- Explore upcoming digital technology and impact on how we work, live and interact