

## Data Analytics Seminar & Workshop

### *Course Synopsis*

This course covers a concise introduction on business analytics and how it is applied in our workplace. In this course, participants will learn the concepts of data management, the common analytical techniques used in work environment - from descriptive and diagnostic analytics to predictive and prescriptive analytics. It equips participants with the ability to present data effectively using various visual techniques through graphical means. Participants will apply what they have learnt through hands-on practical where they perform data analysis and work on dataset to create charts and a dashboard using data analytics tools.

### *Learning Outcomes*

Upon successful completion of this course, the participants will be able to:

- Understand how analytics can be used by organisation to identify new business opportunities and for better decision
- Learn data preparation techniques such as extracting, cleaning and integrating to pre-process data prior to analysis
- Understand common analytical technique in different work scenarios
- Represent data using the appropriate types of visualization
- Use appropriate data visualisation to communication information to viewers
- Design dashboard for the visual representation of data
- Apply visualisation techniques for effective presentation of data through graphical means
- Appreciate how analytical tools can be used to harness data to convert them into actionable information that benefits the organisations

**Course Duration:** 2 days

## Course Lesson Plan:

### Day 1 (Seminar): Introduction to Data Analytics, Artificial Intelligence, Machine Learning

Time	Event
0900 – 0915	<b>Welcome and Opening</b>
0915 – 1000	<b>Data Analytics Demystified</b> <i>Introduction to Data Analytics; the application of data analytics in Logistics, Finance, Human Resource and Training.</i>
1000 – 1030	<b>Tea Break</b>
1030 – 1115	<b>Data Matters</b> <i>Understand the data preparation process</i>
1115 – 1200	<b>Visualising Data</b> <i>Overview of data visualisation and using the appropriate charts to present information.</i>
1200 – 1300	<b>Lunch</b>
1300 – 1415	<b>Machine Learning 101</b> <i>Introduction to Machine Learning, the different modelling techniques in Supervised and Unsupervised Learning.</i>
1415 – 1530	<b>Introduction to Artificial Intelligence (AI)</b> <i>Introduction of AI, use case of applied AI</i>
1530 – 1600	<b>Tea Break</b>
1600 – 1700	<b>Tools for Data Analytics</b> <i>Learn about the various tools that you can use for data analytics.</i>
1700 – 1730	<b>Summary</b>

#### a. Day 2 (Workshop): Data Analytics Software Tools Training

Time	Programme
0900 – 1000	<b>Introduction to Visualization</b>
1000 – 1030	Break
1100 – 1230	<b>Data Prep and Analysis with Excel</b> <ul style="list-style-type: none"> <li>• Data cleaning and transformation</li> <li>• Data Analysis and Data Prep</li> </ul>
1230 – 1330	Lunch
1330 – 1500	<b>Introduction to Visualization</b> <ul style="list-style-type: none"> <li>• Basic Visualization Techniques</li> </ul> <b>Visualization Techniques I</b> <ul style="list-style-type: none"> <li>• Visualising time-series data, proportions and distribution</li> </ul>
1500-1530	Break
1530-1730	<b>Visualisation Techniques II</b> <ul style="list-style-type: none"> <li>• Visualizing correlation and geospatial data</li> <li>• Creating interactive dashboard</li> </ul>