

# CERTIFICATE IN DATA ANALYTICS FOR MANAGEMENT REPORTING USING MICROSOFT EXCEL

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LIMITED  
SEATS

A series of hands-on and practical workshops that will help you master the ability to analyse large amount of data to identify trends and patterns that can influence your decision-making process.

DATES & VENUE	
LEVEL 1	15 & 16 November 2023 (Wednesday & Thursday), 9.00am – 5.00pm Connexion Conference & Event Centre @ The Vertical, Bangsar South, Kuala Lumpur
LEVEL 2	20 & 21 November 2023 (Monday & Tuesday), 9.00am – 5.00pm Wyndham Grand Bangsar Kuala Lumpur
LEVEL 3	22 & 23 November 2023 (Wednesday & Thursday), 9.00am – 5.00pm Wyndham Grand Bangsar Kuala Lumpur

## ENJOY 5% or 10% DISCOUNT

on total programme fees when you register for  
ANY 2 levels, or ALL 3 levels respectively.

Digital Badge in Data Analytics will only be  
given upon completion of assessment and full  
attendance of levels 2 & 3 OR of all 3 levels.



**“Customer is King” has now taken a step back to the new era, “Data is King”. In today’s world of big data, companies can achieve real results with their analytical models based on improvised new data sources. However, big data requires specialised tools and highly skilled professionals. Companies can now achieve similar results on small data using tools such as Microsoft Excel, which can be used to analyse, gather information, and interpret raw data meaningfully.**

**The average person can learn to become a data analyst quickly by mastering the ability to analyse large amount of data to identify trends and patterns that can influence the decision making processes.**

**These highly hands-on practical workshops are specifically designed to help anyone master these skills of comprehending data and how best they can be used to make quick decisions, grow one’s business, and look into areas of cost cutting measures.**

#### METHODOLOGY

Lectures accompanied by practical examples and mini cases.

#### FACILITATOR

##### PALANI MURUGAPPAN

Palani a.k.a. *The Interpreter* (who helps converge data into information), applies the VERIFY™ training methodology, i.e. Validate, Encapsulate and Rationalise raw data in Identifying Information for Future Yield. He is a HRD Corp certified trainer who shares his knowledge and experience culled from over 20 years of involvement in the software application training industry.

If you want to make sense of the data surrounding you; how your organisation’s data can help you expand or cut down areas of expenses; or simply move up the corporate ladder by being ahead in terms of interpreting raw data, the Interpreter will be able to assist by mapping the data into a spreadsheet format like Microsoft Excel and performing various business process analysis.

Excel is the most common spreadsheet used in an office environment. While most are familiar with Excel, only a handful know the art of extracting data from a database; or converging raw data into information using Excel’s built-in tools. This is where the Interpreter excels in showing the many ways of doing this.

## LEVEL

# 1

#### OBJECTIVES

This programme seeks to help you:

- Understand the capabilities of spreadsheets and how best to use them for reporting and simple data analysis
- Apply Excel’s built-in functions and features to gather useful information from raw data
- Gain a good understanding of data analysis and how it can be applied at work

#### PROGRAMME OUTLINE

##### BASICS & FORMATTING WORKSHEETS

- Creating and modifying a worksheet
- Understanding AutoFit, AutoFill, and AutoComplete
- Understanding formatting of numbers (IC No, leading zeros, etc.)
- Changing cell formatting
- Applying numeric formats
- Implications of different numeric formats
- Changing data alignment
- Moving around a sheet using the double-click approach
- Shortcut keys to accomplish tasks quickly
- Other techniques to enhance the appearance of a spreadsheet
- Shortcut keys to display date and time
- Displaying various date and time formats and customising them
- Understanding Accounting & Currency formats to ensure consistency in reporting

##### WORKING WITH FORMULAS

- Basics of the SUM, MAX, MIN, AVERAGE and COUNT formulas
- Incorporating above formulas within different sheets and files
- Converting numbers to percentages using formulas
- Updating Date and Time automatically within reports
- Counting cells with and without data
- Combining functions within functions
- Highlighting specific values using Conditional Formatting
- Applying simple functions within Conditional Formatting to trigger wanted/unwanted values

##### FUNCTIONS FOR DATA ANALYSIS

- Why data analysis?
- How can data analysis help in decision-making process?
- Simplifying the scope of data analysis using Excel
- Introducing the IF function for “what-if” analysis
- Combining IF function based on given conditions with other functions
- Introducing SUMIF, AVERAGEIF, and COUNTIF functions for single conditions on data analysis
- Application of above functions in areas of data analysis

##### CREATING CHARTS FOR VISUAL DISPLAYS

- Importance of visual displays
- How to select the “right” type of chart based on data presented
- All about charts and how they help you analyse data for better business decision-making
- Understanding Pie Charts, Bar Charts, Column Charts, Bubble Charts, Line Charts, Combination Charts
- Modifying chart layouts
- Converting one type of chart to another
- Customising Combo charts by changing the Markers
- Adding images to Markers in different ways

#### WHO SHOULD ATTEND

Anyone wanting to understand spreadsheets and apply Excel’s built-in functions and formatting features.

**Pre-requisite:** A basic understanding of Excel and its capabilities together with some knowledge of spreadsheets.

##### OTHER EXCEL FEATURES

- Inserting comments
- Printing comments separately
- Sorting data:
  - > Identify primary data
  - > Perform case sensitive sorting
  - > Other sort options
- Applying headers and footers
- Modifying page properties
- Adding background pictures
- Removing error messages from being printed
- Printing header rows/columns
- Changing default options

##### PIVOT TABLE

- Introduction to Pivot Table
- Analysing headers of database and how best to retrieve information from it
- Enhancing appearance of Pivot Table
- Performing data analysis using Pivot Table
- Customising formats of Pivot Table data
- Sorting data within Pivot Table
- Performing date analysis by Year, Quarter, and Month
- Applying conditional formatting within Pivot Table

##### ANALYSING RAW DATA

- Basic analysis of raw data using functions and features covered above
- Case Study on Introduction to Data Analysis
- Presenting data using functions and charts



Participants are required to bring their own laptop installed with Microsoft Excel 2010/2013/2016.

## LEVEL 2

### OBJECTIVES

This programme seeks to help you:

- Gain the skill to perform projections, apply What-if calculations, create simple payroll system, look up specific values from raw data, and perform advanced calculations by combining functions in Excel
- Understand the use of logical functions, solve loan calculation problems, forecast future values for sales projections, and format text data

### PROGRAMME OUTLINE

#### USEFUL TIPS, TECHNIQUES, AND FEATURES OF EXCEL

- Learn various shortcuts and techniques in formatting
- Validate a specific range of cells
- Applying various aspects of Conditional Formatting
- Password protect a range of cells and workbook
- Applying Filters, Advanced Filter, and Reapply option
- Verifying filtered results against formulas and trouble-shooting unwanted results
- Performing calculations using subtotals
- Understanding arguments within the Subtotal function
- Converting text to numbers from external data file
- Absolute Cell Referencing (appropriate use of the \$ sign in formulas)
- Implication of \$ sign within reference cells when copying and applying formulas
- Applying Custom Lists
- Changing text orientation
- Creating a watermark
- Various Format Code options
- Displaying large numbers in "K" and "M"
- Changing default settings

#### UNDERSTANDING THE USE OF LOGICAL FUNCTIONS

- Comparing and analysing sets of data
- Applying the IF statement for comparison purposes
- Use of logical statements based on mathematical logic and symbols
- Benefits of IF statement and how other functions can be used within it
- Use of Conditional Formatting within IF statement
- Applying the Nested IF statement for more than a single condition

#### SEARCHING SPECIFIC VALUES USING LOOKUP FUNCTION

- Concept of database
- How to set up a database?
- Difference between horizontal and vertical based databases
- Applying VLOOKUP (vertical) and HLOOKUP (horizontal) functions to search specific values from a database
- Application of VLOOKUP in calculating bonuses for multi-tier payment scheme
- Creating drop-down list option within lookup value
- Specifying conditional formatting rules to select entire row based on selection of lookup value
- Converting existing nested IF table to a VLOOKUP table

#### ANALYSING DATA USING PIVOT TABLE

- Use of Pivot Table
- Updating and modifying Pivot Table
- Changing calculated fields in Pivot Table
- Rearranging fields in a Pivot Table
- Explaining the report layout options
- Using the report filters feature
- Using Top 10 & Date Filters
- Handling blank cells
- Sorting a Pivot Table

### WHO SHOULD ATTEND

Anyone with a basic understanding of Excel wanting to know the finer points in formatting and solving calculation issues using Excel's functions and features.

**Pre-requisite:** A basic understanding of formatting numbers and applying functions such as SUM, MAX, MIN, AVERAGE, COUNT, simple IF statements, and knowledge of creating charts.

- Formatting a Pivot Table
- Creating custom formats
- Adding formulas to a Pivot Table
- Changing a calculation in a Pivot Table
- Counting with a Pivot Table
- Applying slicers and timeline within Pivot Table
- Creating Pivot Charts as dashboards
- Using data model to link multiple databases into a single table
- Creating relationships to link common fields within databases

#### DATA CLEANSING TECHNIQUES USING TEXT FUNCTIONS

- Checking for duplicate and redundant records
- Comparing contents of one cell with another
- Replacing specific text with another
- Removing unwanted spaces within a cell content
- Combining contents of various cells into a single cell
- Finding length of text within a cell
- Repeating a character numerous times
- Converting text to upper and lower cases

#### DATE AND TIME CALCULATIONS

- Understanding how Excel handles date calculations
- Limitation of dates in Excel
- Calculating differences of two dates and converting it to Years, Months and Days
- Understanding various date formats and performing calculations accordingly
- Displaying time in 12, 24 and beyond 24 hours format
- Time based calculations based on data provided

#### FORECASTING AND ANALYSIS USING STATISTICAL FUNCTIONS

- Performing various "What-if" calculations
- Understanding types of charts for forecasting of linear and exponential growth
- Forecasting future values based on previous results (e.g. sales forecasting, market analysis, etc.)

#### UNDERSTANDING DIFFERENCES IN LOAN CALCULATIONS

- Long and short term loan calculations
- Paying off loans faster
- Calculating interest and principal portion of loan repayments
- Applying Goal Seek for various What-If analysis
- Performing calculations within Data Tables for two input tables
- Interpreting results of loan analysis

#### OTHER EXCEL FUNCTIONS

- Ranking variables in descending or ascending order
- Performing calculations based on a given condition
- Transposing of data and how Excel handles the calculations
- Password protecting range of cells based on different options used

## LEVEL 3

### OBJECTIVES

This programme seeks to help you:

- Understand the more advanced functions and features Excel offers
- Perform various statistical analysis using the statistical functions
- Analyse data using some of the more advanced built-in features
- Comprehend the more advanced text functions and its applications
- Perform date and time calculations for a given period or time
- Incorporate multiple charts and understand the use of histogram
- Learn to use and invoke the Add-Ins
- How best to apply a What-if analysis using the Solver

### PROGRAMME OUTLINE

#### SUMMARISING & ANALYSING DATA WITH ADVANCED FUNCTIONS

- Application of IF function for multiple conditions
- Alternative functions to VLOOKUP and COUNTIF in performing analysis
- Difference methods of setting up tables in performing database calculations
- Consolidating data from multiple different ranges/worksheets
- Using Array based formulas for selecting ranges and comparing against single cell value
- Applying multiple condition functions to perform data analysis
- Mastering database functions with criterias to extract information from databases and compare answers with other function analysis
- Advanced text functions and how they can be used to extract information from raw data
- Converting one unit of measurement to another (e.g. celsius to fahrenheit, pounds to grams, etc.)

#### ADVANCED FEATURES OF EXCEL FOR DATA ANALYSIS

- Applying Scenario Manager for performing best, worst, and most likely situations
- Working with various aspects of tables
- Finding cells containing data for a given period
- Highlighting specific row and every other row
- Preventing formulas from being displayed
- Creating a drop down list to display multiple options within single cell
- How to trigger single valued data if wrong option is selected from drop down list?
- Applying Solver for What-If analysis (maximising profits, minimising cost, or looking for optimised solution)

#### WORKING WITH ADVANCED CONDITIONAL FORMATTING

- Visualising data using customised Data Bars, Colour Scales, and Icons
- Adding Formulas to Conditional Formatting
- Comparing Dates with Conditional Formatting
- Highlighting cells by applying formulas within Conditional Formatting
- Linking formulas in Conditional Formatting with records within Database to highlight specific conditions
- Comparison and highlighting of dates in ageing reports using Conditional Formatting

#### CREATING COMPLEX ADVANCED CHARTS TO DASHBOARDS

- Creating Gantt Charts
- Working with Histograms

### WHO SHOULD ATTEND

Proficient Excel users wanting to learn when and how to apply Excel's more advanced functions and features.

**Pre-requisite:** An understanding of formatting numbers & text, and applying functions. Advisable to have attended the Certificate in Data Analytics for Management Reporting Using Microsoft Excel (Level 2).

- Creating Histograms within built-in Add-In feature
- Analysing distribution of data using charts
- What are Excel dashboards?
- Improving data visualisations using dashboards
- Managing functions to create dashboard objects
- Optimising drop down list options within dashboards
- Mastering the OFFSET function for dynamic chart purposes

#### CREATING POWERFUL FORMULAS

- Using Format Code options within formulas in cells to highlight specific results
- Using the TEXT function for formatting display of data
- Generating random text data and analysing it
- Creating a lucky draw system to randomise lucky winners
- Using Text and Logical functions within Data Validation to ensure specific data is accepted within selected cells
- Applying Goal Seek in a What-if analysis
- Converting text to numbers and vice versa
- Using various Date and Time functions
- Using CHOOSE, INDEX, MATCH, and OFFSET functions
- Looking up data on the left side as compared to VLOOKUP
- Format control options used within Form Control buttons
- Using the RAND and RANDBETWEEN functions
- Ranking & sorting formulas
- General purpose IFERROR function
- Determining the sign of a number
- Addressing date calculations incorporating off days and public holidays
- Application of new functions within Microsoft Excel 365
- Statistical analysis using statistical functions
  - > Checking for distribution of raw data using statistical functions
  - > Interpreting the analysis of raw data upon using statistical functions
  - > Benefits of using statistical functions for analysing data

#### APPLYING ADD-INS IN EXCEL & CASE ANALYSIS

- Applying Add-Ins to use non-standard features and functions in Excel
- Generating raw data (numbers, text, combination of text and numbers) and performing case analysis
- Highlighting weekends, off days, and verifying calculations of date calculations within the case analysis
- Combining functions and features within case analysis and concluding from data



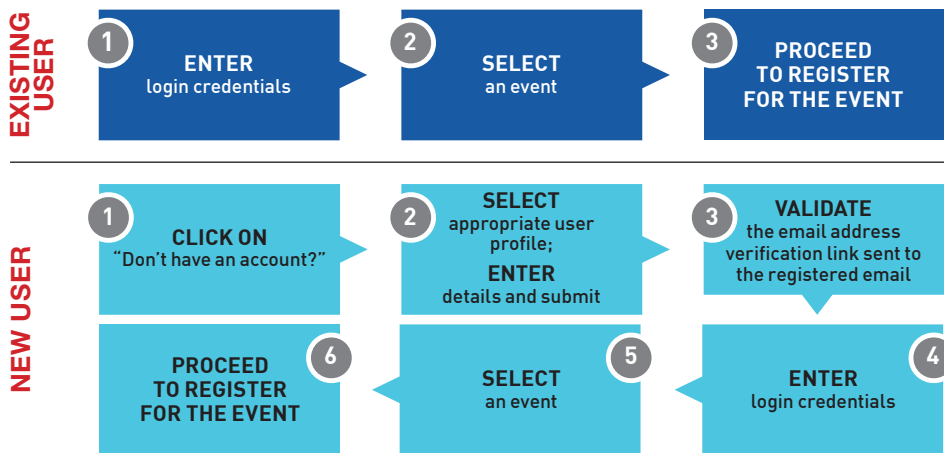
# Certificate in Data Analytics for Management Reporting Using Microsoft Excel

With immediate effect, enrolment for all CPE programmes will be

**STRICTLY VIA ONLINE REGISTRATION ONLY**

## REGISTRATION PROCESS

- To view more events and download the full brochure, please visit: [pd.mia.org.my](http://pd.mia.org.my)
- Search and select the event
- Click 'Register' to experience the new system by continuing with the respective steps below:



For any assistance, please call (8.45am-5.30pm, Monday-Friday)  
**MIA Help Desk @ 603-2722 9000**

## TERMS & CONDITIONS

### PROGRAMME FEE

- Fee is payable to MALAYSIAN INSTITUTE OF ACCOUNTANTS
- Depending on the event, the fee includes course materials and/or lunch and/or tea breaks.
  - Individual Registration:** Full payment shall be made at the point of online registration.
  - Corporate Registration:** Full payment shall be made within thirty (30) days from the date of the Invoice or 1 day before the programme, whichever earlier.
- Admittance to the programme shall be granted only upon full payment as per the above requirement.

### PAYMENT MODE

- Payment must be made through the **electronic channels i.e. online payment via the MIA member service portal and electronic fund transfer (EFT).**
- Payment by **cash and cheque is NOT ACCEPTABLE** effective from 1 January 2022.

### HRD CORP (FOR CLAIMABLE EVENTS ONLY)

- MIA is an approved Training Provider registered under 'Institut Akauntan Malaysia' (MyCoID: 631967).
- Employer's Obligations**
  - To ensure grant approval is obtained prior to event registration and to provide the Grant ID notification upon event registration.
  - To make full payment to MIA as per the issued Invoice within 14 working days upon receipt of MIA's notification in the event the approved training fee is cancelled by HRDC due to non-compliance on the part of the participant or his/her employer or any valid reasons stipulated by HRDC.
  - To settle the balance payment to MIA within 14 working days upon receipt of MIA's notification in the event only partial claim is approved by HRDC. MIA will provide copy of the original invoice and will not issue a new invoice for the balance amount.
  - If employer has made payment prior to grant approval, a refund will be made to employer subject to reimbursement received from HRDC. Refund will be made upon receipt of duly completed employer's EFT Form.
  - To provide required information and/or documents after completion of event for the purpose of HRDC Claim within 7 working days upon receipt of MIA's notification.

### CANCELLATION

Should the participant decide to cancel his/her enrolment, a cancellation policy shall be applied as follows:

- For written cancellation received with minimum seven (7) days' notice from the date of the programme, no penalties will be imposed and full refund will be made to participants who have paid.
- For written cancellation received less than seven (7) days from the date of the programme, an administrative charge of 20% of the registration fee will be imposed. Unpaid registrations will also be liable for a 20% administrative charge.
- No refunds will be made for written cancellations received on the day of the programme or for participants who failed to join the programme. Unpaid registrations will also be liable for full payment of the registration fee.
- Replacing registered participants is not allowed.
- Paid registration that is cancelled can opt to transfer the paid amount to future event(s) after deducting any applicable administrative charges.
- The transfer request to future event(s) should be confirmed by Corporate/Individual within three (3) days after cancellation otherwise the cancellation will be confirmed with refund action. Transfer request will not be entertained after the refund is processed.

- Corporate/Individual is required to top-up the balance amount if the amount to be transferred to the future event is insufficient.
- Any excess amount after transfer will be refunded to the Corporate/Individual's bank account as provided in the EFT form.
- Corporate/Individual is required to provide the EFT form each time when a refund is requested.

### PARTICIPANT'S CLASSIFICATION AND INFORMATION

Category: Corporate/Individual

- Please select the participant classification carefully as it determines the fee payable. No alteration will be allowed upon registration.
- The information on Corporate/Individual provided shall be deemed true and correct. No alteration will be allowed upon registration.

### VERIFICATION OF ATTENDANCE

- All participants are required to present photo identification (NRIC, driving licence or company's ID card) at the point of registration prior to signing the registration list when attending the programme. Admittance may be denied upon failure to present photo identification.

### CERTIFICATE OF ATTENDANCE AND CPE CREDIT HOURS

- Upon full attendance of the programme, participants will be issued an e-certificate of attendance. For this purpose, it is **COMPULSORY** to fill in the email address clearly.
- CPE credit hours will be credited into the MIA Member Services Portal within 14 days of the programme for participants who have complied with all terms and conditions stipulated herein.
- Participants will only be entitled to the CPE hours upon attending the entire duration of the programme. CPE hours will not be accorded for partial attendance.

### COPYRIGHT

The materials of the programme shall not be disclosed or used in any manner, either wholly or partially against any other parties and/or used in any manner, either wholly or partially as a defence by you and/or any other parties under any circumstances. The participants are therefore prohibited from reproducing any materials of this programme. All copyright and/or intellectual property rights in any relevant materials produced in this Programme will remain with the party who produced such materials. MIA disclaims responsibility for the materials of this programme. Neither the MIA, its Council or any of its Boards or Committees nor its staff shall be responsible or liable for any claims, losses, damages, costs or expenses arising in any way out of or in connection with any persons relying upon the materials provided during the programme.

### DATA PROTECTION

Information given by the participants to MIA is true, accurate and to the best of their knowledge. The participants have read and agreed with the Privacy Notice as stated on MIA's official website and therefore, allow MIA to collect, process, store and use the participants' data other than what is provided under the Personal Data Protection Act 2010.

### EXCLUSION OF LIABILITY

This programme shall not constitute an endorsement of the speaker(s) by MIA and MIA shall not be liable for whatsoever circumstances arising from any engagement between the speaker(s) and the programme's participants.

### DISCLAIMER

Malaysian Institute of Accountants (MIA) reserves the right to change the speaker(s), date(s), time(s) and to cancel the programme should circumstances beyond its control arise. MIA shall not be responsible for any costs, damages or losses incurred by the participant due to the changes and/or cancellation. MIA also reserves the right to make alternative arrangements without prior notice should it be necessary to do so. Upon registering, you are deemed to have read and accepted the terms and conditions herein.

## PROGRAMME FEES

Level	Fees (RM)	
	Member	Non-member
1 or 2 or 3	1,500.00	1,800.00
* 1 & 2 or 2 & 3	2,850.00	3,420.00
* 1, 2 & 3	4,050.00	4,860.00

*Preferred Payment: Pay with MIA-CIMB Affinity Credit Card.*

Please tick where applicable:

Participant			Level	Total (RM)
1	2	3		
			1	
			2	
			3	
			1 & 2	
			2 & 3	
			1, 2 & 3	

## PROGRAMME DETAILS & REGISTRATION

**LEVEL 1 : 15 & 16 November 2023**  
Connexion Conference & Event Centre @ The Vertical, Bangsar South, Kuala Lumpur

HRDC Training Programme No. : 10001226666

**LEVEL 2 : 20 & 21 November 2023**  
Monday & Tuesday  
Wyndham Grand Bangsar Kuala Lumpur

HRDC Training Programme No. : 10001226364

**LEVEL 3 : 22 & 23 November 2023**  
Wednesday & Thursday  
Wyndham Grand Bangsar Kuala Lumpur

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