

Data Analytics Academy Syllabus

Duration: 4 months

Courses: 5 modules

Module 1: Microsoft Excel basics

Week	Topic	Evaluation
1	General Overview: Meaning of Analytics, tools needed, role in industry. History of Microsoft Excel, Utility.	Write on <i>The Significance of Data Analytics in Nigeria</i> ; Must include 10 companies in Nigeria, Sectors that can use analytics. 1 page, 12 font size and 1.0 line space
2	Workbook and worksheet, row + column; number, inserting new, deleting), cell, name box, formula bar, freeze pane, data type, auto fill, conditional formatting, Sorting and Filtering	Answer the questions on the fish data set
3	Basic mathematical Operations, referencing (Lock)	Build a Multiplication Table and a CGPA table
4	cross sheet calculations, IF statement, linking Excel to Word, locking your document, Charts	Answer the questions on SAMA dataset
5	Introduction to Ribbons: The naira symbol, Page Layout, Formulas, Data, Review, View, Data gathering from other sources, Introduction to Pivot table	Write a report on SAMA dataset in Microsoft word (2 pages) linking your spread sheet to it and locking it with your preferred password

Bonus: Creating form in Excel

Module 2: Advanced Microsoft Excel for Data Analytics

Week	Topic	Evaluation
1	Introduction to plugins, Paste Special: Format, formulas...	Write on <i>5 plugins in Microsoft Excel</i> ; 1 page, 12 font size and 1.0 line space
2	Conditional Formatting	Using a Sample dataset to practice
3	Filter and Date, Pivot Table	Using a Sample dataset to practice
4	Inbuilt functions: Advanced Conditional Statement, SUM, SUMIFS, ROUND, VLOOK_UP, INDEX, MATCH, OFFSET-MATCH	Using a Sample dataset to practice

Module 3: POWER BI:

Week	Topic	Evaluation
1	General Overview: History, other visualization tools (SPSS, Excel, TABLEAU , E-view, Matlab, IBM Cognos) download and install) General interface	Write on the pros and cons of PowerBI and Tableau: 1 page, 12 font size and 1.0 line space
2	Importing data, Transforming Data, Modeling	Using Superstore dataset and covid 19 dataset
3	Power Query	Superstore Dataset and covid 19 dataset
4	Visualization: Charts, graphs, tables, filter, maps, slicers...	
5	DAX: Data Analysis Expression: Calendar (year, month, month no, week, day), Previous month, MOM, SPLY, YTD...	
6	Automation in Power BI: Consolidating Worksheet	Automate the Superstore and Covid 19 dataset

Module 4: SQL (Structured Query Language)

Week	Topic	Evaluation
1	General Overview: <ul style="list-style-type: none">- Meaning, Usage, SQL types- Download, install and Introduction to Database	Write on 5 software that allow SQL queries: 1 page, 12 font size and 1.0 line space
2	Primary and Foreign Keys, Tables, download and install	
3	Data Types: - str, char, varchar, int, num, enum, decimal <ul style="list-style-type: none">- float, datetime, timestamp, Binary Large Object-BLOB	
4	Creating Table: <ul style="list-style-type: none">- Create, auto-increment, insert, update- Delete, order by, group by, distinct, limit- Where, exist, not exist, alter (add, remove, rename), drop, truncate	
5	JOIN: <ul style="list-style-type: none">- Inner, Left, Right, Outer, Roll Back, Revoke, Commit	
6	SQL Best Practices: <ul style="list-style-type: none">- Good codes, choosing and writing names, color- indentation, readability, comment (single, large)	

Module 5: PYTHON

Week	Topic	Evaluation
1	General Overview: <ul style="list-style-type: none">- History, usage of python, IDLE types- Download and install Anaconda	
2	Data types in Python: <ul style="list-style-type: none">- Data type: String, Integer, float, Boolean- List, Tuple, Set, Dictionary, Format	
3	Data Structure: <ul style="list-style-type: none">- Notation, slice notation,	
4	Loops: <ul style="list-style-type: none">- for loop, while loop, lambda expression	Create a loop of prime numbers, odd and even numbers up to 1000,
5	Functions: <ul style="list-style-type: none">- Defining, assigning variables in functions	
6	Numpy library: <ul style="list-style-type: none">- A walk through Numpy and its functions	
7	Pandas library: <ul style="list-style-type: none">- Working with pandas	
8	Matplotlib: <ul style="list-style-type: none">- Creating and Exploring through Matplotlib visualization pattern- Creating a Pie Chart- Creating a bar chart and a histogram chart- Creating a box plot and stripplot with Matplotlib	
9	Seaborn: <ul style="list-style-type: none">- A walk through seaborn modules- Different style patterns in seaborn	
10	Plotly: Visualizing and creating path with plotly	