

Data Analytics Course

Course Key Points:

- **Zero to Hero:** Start from scratch, end with advanced expertise.
- **100% Placement Assistance:** Resume building, mock interviews
- **Tools + Theory + Practice:** Real world projects for every module.
- **Flexible Learning:** Online/offline batches, lifetime access to resources.

Who Is This For?

- Freshers, career switchers, and professionals seeking a **lucrative data career**.
- Entrepreneurs wanting to leverage data for business growth.
- Students aiming to stand out in tech driven industries.

Enroll Now! Limited Seats –

Module 1 – Excel (Basics to Advanced)

Why Excel?

- Used by more than **99% of companies** for quick data tasks.

Chapter 1: Excel Basics

- **Interface Overview:** Ribbon, Quick Access Toolbar, Worksheets, Cell Rows, Columns.
- **Data Entry:** Typing, editing, and navigating data.
- **Formatting:** Font styles, borders, number formatting, conditional formatting.
- **Shortcuts:** Essential keyboard shortcuts for efficiency.

Chapter 2: Math Functions

- **SUM:** Adds numbers in a range.
- **AVERAGE:** Calculates the mean of numbers.
- **MIN/MAX:** Finds the smallest/largest value in a range.
- **ROUND:** Rounds numbers to specified digits.
- **SUMIF/SUMIFS:** Adds numbers based on single/multiple conditions.
- **SUBTOTAL:** Performs calculations on filtered data.

Chapter 3: Text Functions

- **CONCATENATE:** Combines text from multiple cells.
- **LEFT/RIGHT/MID:** Extracts substrings from text.
- **LEN:** Counts characters in a cell.
- **TRIM:** Removes extra spaces from text.

- **UPPER/LOWER/PROPER:** Changes text case.
- **FIND/SEARCH:** Locates a substring within text.
- **REPLACE/SUBSTITUTE:** Replaces text in a string.
- **TEXT:** Converts numbers to text with formatting.

Chapter 4: Statistical Functions

- **COUNT/COUNTA:** Counts numbers/nonempty cells.
- **COUNTIF/COUNTIFS:** Counts cells based on single/multiple conditions.
- **AVERAGEIF/AVERAGEIFS:** Averages cells based on conditions.
- **MEDIAN:** Finds the middle value in a range.
- **MODE:** Finds the most frequent value.

Chapter 5: Logical Functions

- **IF:** Performs conditional checks.
- **AND/OR:** Combines multiple conditions.
- **IFERROR:** Handles errors in formulas.
- **IFS:** Checks multiple conditions without nesting.
- **SWITCH:** Evaluates multiple conditions and returns a value.

Chapter 6: Lookup Functions

- **VLOOKUP:** Finds data in a table vertically.
- **HLOOKUP:** Finds data in a table horizontally.
- **INDEXMATCH:** Flexible alternative to VLOOKUP.
- **XLOOKUP:** Modern replacement for VLOOKUP and HLOOKUP.
- **CHOOSE:** Selects a value from a list based on an index.

Chapter 7: Financial Functions

- **PMT:** Calculates loan payments.
- **FV:** Calculates the future value of an investment.
- **NPV:** Calculates the net present value of cash flows.
- **IRR:** Calculates the internal rate of return.
- **RATE:** Calculates the interest rate for a loan or investment.
- **PV:** Calculates the present value of an investment.

Chapter 8: Date & Time Functions

- **TODAY/NOW:** Returns the current date/time.
- **DATE:** Creates a date from year, month, and day.
- **DATEDIF:** Calculates the difference between dates.
- **EOMONTH:** Returns the last day of the month.
- **NETWORKDAYS:** Calculates working days between dates.

Chapter 9: Advanced Tools

- **Pivot Tables:** Summarizes and Analyzes large datasets.
- **Power Query:** Cleans, transforms, and merges data.
- **Data Validation:** Restricts data entry to specific criteria.

- **WhatIf Analysis:** Scenario Manager, Goal Seek, Data Tables.
- **Solver:** Optimizes solutions for complex problems.
- **Macros:** Automates repetitive tasks.
- **Dynamic Arrays:** Spills results across multiple cells.

Module 2 – VBA (Automate Excel Like a Pro)

Why VBA?

- Automate repetitive tasks.

Chapter 1: Introduction to VBA

- **What is VBA?:** Overview of Visual Basic for Applications.
- **VBA Editor:** Navigating the interface, modules, and procedures.
- **Macro Recording:** Automating repetitive tasks using the Macro Recorder.
- **Security Settings:** Enabling and disabling macros.

Chapter 2: VBA Basics

- **Variables and Data Types:** Declaring and using variables (Integer, String, Bool, etc.).
- **Operators:** Arithmetic, comparison, and logical operators.
- **Procedures:** Subroutines and functions.
- **Comments:** Adding comments for code clarity.

Chapter 3: Control Structures

- **If...Then...Else:** Conditional statements.
- **Select Case:** Multiple conditional checks.
- **For...Next:** Looping through a range of values.
- **Do While/Do Until:** Looping based on conditions.
- **For Each:** Looping through collections (e.g., cells, worksheets).

Chapter 4: Working with Excel Objects

- **Workbook and Worksheet Objects:** Opening, closing, and navigating workbooks/worksheets.
- **Range Objects:** Selecting, formatting, and manipulating cells.
- **Cell Referencing:** Absolute and relative referencing.
- **Collections:** Working with groups of objects (e.g., all sheets in a workbook).

Chapter 5: UserDefined Functions (UDFs)

- **Creating Custom Functions:** Writing reusable formulas.
- **Passing Arguments:** Using parameters in functions.
- **Returning Values:** Setting function outputs.
- **Calling Functions:** Using UDFs in Excel sheets.

Chapter 6: Error Handling

- **On Error Statements:** On Error Resume Next, On Error GoTo.
- **Debugging Tools:** Breakpoints, Immediate Window, Watch Window.
- **Error Messages:** Customizing error prompts.

Chapter 7: User Forms and Controls

- **Designing User Forms:** Adding text boxes, buttons, and labels.
- **Event Handling:** Writing code for button clicks, form loads, etc.
- **Data Validation:** Ensuring user input meets criteria.
- **Linking Forms to Worksheets:** Transferring data between forms and Excel.

Chapter 8: Optimizing VBA Code

- **Code Efficiency:** Reducing runtime and memory usage.
 - **Best Practices:** Writing clean, maintainable code.
 - **Error Prevention:** Avoiding common mistakes.
-

Module 3 – Power BI (Data Visualization)

Why Power BI?

- **1 tool** for business intelligence (Gartner).

Chapter 1: Introduction to Power BI

- **What is Power BI?:** Overview of Power BI and its applications.
- **Power BI Ecosystem:** Power BI Desktop, Service, and Mobile.
- **Installing Power BI:** Setting up Power BI Desktop.
- **Interface Overview:** Ribbon, report view, data view, model view.

Chapter 2: Data Import and Transformation

- **Data Sources:** Importing data from Excel, CSV, SQL, and web sources.
- **Power Query Editor:** Cleaning and transforming data.
 - Removing duplicates, filtering rows, and splitting columns.
 - Merging and appending queries.
 - Pivoting and unpivoting data.
- **Data Types:** Setting correct data types (text, numbers, dates).

Chapter 3: Data Modeling

- **Relationships:** Creating and managing relationships between tables.
- **Star Schema:** Designing efficient data models.
- **Calculated Columns:** Adding new columns using DAX (Data Analysis Expressions).
- **Measures:** Creating aggregations (e.g., SUM, AVERAGE).
- **Hierarchies:** Building hierarchies for drilldown analysis.

Chapter 4: DAX (Data Analysis Expressions)

- **Basic DAX Functions:**
 - SUM, AVERAGE, COUNT, MIN, MAX.
 - CALCULATE: Modify filter context.
 - FILTER: Apply filters to calculations.
- **Logical Functions:**
 - IF, AND, OR, SWITCH.
- **Text Functions:**
 - CONCATENATE, LEFT, RIGHT, MID.
- **Date and Time Functions:**
 - DATE, YEAR, MONTH, DAY, DATEDIFF.
- **Time Intelligence Functions:**
 - TOTALYTD, SAMEPERIODLASTYEAR, DATEADD.

Chapter 5: Visualizations

- **Basic Charts:** Bar charts, line charts, pie charts, and tables.
- **Advanced Visuals:**
 - Maps: Filled maps, bubble maps.
 - Treemaps, waterfalls, and funnels.
 - Custom visuals from the marketplace.
- **Filters and Slicers:** Adding interactive filters to reports.
- **Drillthroughs:** Enabling detailed analysis on specific data points.
- **Tooltips:** Customizing tooltips for better insights.

Chapter 6: Report Design and Formatting

- **Themes:** Applying and customizing themes.
- **Layouts:** Organizing visuals for clarity and impact.
- **Buttons and Bookmarks:** Creating interactive navigation.
- **Conditional Formatting:** Highlighting key data points.
- **Mobile Layouts:** Optimizing reports for mobile devices.

Chapter 7: Power BI Service

- **Publishing Reports:** Uploading reports to Power BI Service.
- **Dashboards:** Creating and managing dashboards.
- **Sharing and Collaboration:** Sharing reports with stakeholders.
- **Data Refresh:** Setting up scheduled refreshes for live data.

Chapter 8: Advanced Power BI Features

- **Power BI Gateway:** Connecting to onpremises data sources.
- **Power BI Embedded:** Integrating Power BI reports into applications.

Chapter 9: Optimizing Power BI Reports

- **Performance Tuning:** Reducing report load times.
- **Best Practices:** Designing efficient data models and visuals.

Module 4 – Google Sheets (Collaborative Analytics)

Why Google Sheets?

- **Realtime collaboration** for remote teams.
- Free, Cloud Based alternative to Excel.

Chapter 1: Introduction to Google Sheets

- **What is Google Sheets?:** Overview of Google Sheets and its advantages.
- **Google Sheets vs. Excel:** Key differences and use cases.
- **Interface Overview:** Menu bar, toolbar, sheets, and cells.
- **Collaboration Features:** Realtime editing, sharing, and commenting.

Chapter 2: Basic Functions and Formulas

- **Basic Math Functions:**
 - SUM, AVERAGE, MIN, MAX, COUNT.
- **Text Functions:**
 - CONCATENATE, LEFT, RIGHT, MID, LEN, TRIM.
- **Logical Functions:**
 - IF, AND, OR, NOT, IFERROR.
- **Lookup Functions:**
 - VLOOKUP, HLOOKUP, INDEX, MATCH.
- **Date and Time Functions:**
 - TODAY, NOW, DATE, DATEDIF, NETWORKDAYS.

Chapter 3: Data Cleaning and Transformation

- **Data Validation:** Creating dropdown lists and restricting data entry.
- **Conditional Formatting:** Highlighting cells based on rules.
- **Filter and Sort:** Organizing data for better analysis.
- **Split Text to Columns:** Separating data into multiple columns.
- **Remove Duplicates:** Cleaning datasets by eliminating duplicates.

Chapter 4: Advanced Functions

- **Array Formulas:** Performing calculations on multiple rows/columns.
 - ARRAYFORMULA, FILTER, UNIQUE, SORT.
- **Query Function:** Writing SQLlike queries for data analysis.
 - Example: =QUERY(A1:D100, "SELECT A, B WHERE C > 100").
- **Import Functions:**
 - IMPORTRANGE: Import data from other sheets.
 - IMPORTDATA: Import data from CSV or TSV files.
 - IMPORTXML: Extract data from web pages.

Chapter 5: Data Visualization

- **Charts and Graphs:** Creating bar charts, line charts, pie charts, and scatter plots.

- **Sparklines:** Adding minicharts within cells.
- **Pivot Tables:** Summarizing and Analyzing large datasets.
- **Custom Formulas in Charts:** Using formulas to create dynamic visuals.

Chapter 6: Collaboration and Automation

- **Sharing and Permissions:** Setting view, comment, and edit access.
- **Version History:** Tracking changes and restoring previous versions.
- **Google Apps Script:** Automating tasks with JavaScriptbased scripts.
 - Example: Automating email notifications or data updates.

Chapter 7: Integration with Other Tools

- **Google Data Studio:** Connecting Google Sheets to create interactive dashboards.
 - **Google Forms:** Automatically populating sheets with form responses.
 - **Google Drive:** Storing and organizing sheets in the cloud.
-

Module 5 – MySQL (Database Mastery)

Why MySQL?

- **Businesses** use SQL for data storage.

Chapter 1: Introduction to MySQL

- **What is MySQL?:** Overview of MySQL and its role in data management.
- **Relational Databases:** Understanding tables, rows, and columns.
- **MySQL Workbench:** Navigating the interface and tools.
- **Installing MySQL:** Setting up MySQL on your system.

Chapter 2: Database Design

- **Data Types:** Strings, numbers, dates, and blobs.
- **Primary Keys and Foreign Keys:** Ensuring data integrity.
- **Normalization:** Reducing redundancy through 1NF, 2NF, and 3NF.
- **EntityRelationship Diagrams (ERDs):** Visualizing database structure.

Chapter 3: Basic SQL Queries

- **SELECT:** Retrieving data from tables.
- **WHERE:** Filtering data based on conditions.
- **ORDER BY:** Sorting query results.
- **LIMIT:** Restricting the number of rows returned.
- **DISTINCT:** Removing duplicate rows.

Chapter 4: Data Manipulation

- **INSERT:** Adding new records to a table.

- **UPDATE:** Modifying existing records.
- **DELETE:** Removing records from a table.
- **TRUNCATE:** Deleting all records from a table.

Chapter 5: Joins and Relationships

- **INNER JOIN:** Combining rows with matching values.
- **LEFT JOIN:** Returning all rows from the left table and matching rows from the right table.
- **RIGHT JOIN:** Returning all rows from the right table and matching rows from the left table.
- **FULL OUTER JOIN:** Returning all rows when there is a match in either table.
- **SelfJoin:** Joining a table to itself.

Chapter 6: Aggregation and Grouping

- **GROUP BY:** Grouping rows based on column values.
- **HAVING:** Filtering groups based on conditions.
- **Aggregate Functions:**
 - COUNT, SUM, AVG, MIN, MAX.
- **Subqueries:** Writing nested queries for complex analysis.

Chapter 7: Advanced SQL Techniques

- **Indexes:** Improving query performance with indexes.
- **Views:** Creating virtual tables for simplified querying.
- **Stored Procedures:** Writing reusable SQL code blocks.
- **Triggers:** Automating actions based on database events.
- **Transactions:** Ensuring data consistency with COMMIT and ROLLBACK.

Chapter 8: Data Import and Export

- **Importing Data:** Loading data from CSV, Excel, or other databases.
- **Exporting Data:** Saving query results to files.
- **Backup and Restore:** Creating and restoring database backups.

Module 6 – Python (Programming for Analytics)

Why Python?

- **1 language** for data science (IEEE).
- Automate tasks, analyze big data, and build ML models.

Chapter 1: Introduction to Python

- **What is Python?:** Overview of Python and its applications in data analytics.
- **Installing Python:** Setting up Python and Jupyter Notebook.
- **Python Basics:** Variables, data types, and operators.
- **Writing Your First Program:** Hello, World!

Chapter 2: Python Fundamentals

- **Control Structures:**
 - if, else, elif for decision-making.
 - for and while loops for iteration.
 - **Functions:** Defining and calling functions.
 - **Data Structures:**
 - Lists, tuples, sets, and dictionaries.
 - **File Handling:** Reading from and writing to files.
-

Module 7: Python Programming- Working with Libraries

Chapter 1: Python Libraries

- **NumPy:**
 - Arrays and array operations.
 - Mathematical functions (e.g., np.sum, np.mean).
- **Pandas:**
 - DataFrames and Series.
 - Data manipulation: filtering, sorting, and grouping.
 - Handling missing data.
- **Matplotlib and Seaborn:**
 - Creating visualizations: line plots, bar charts, histograms, and heatmaps.
 - Customizing plots with labels, titles, and legends.

Chapter 2: Data Cleaning and Preparation

- **Handling Missing Data:** Filling, dropping, or interpolating missing values.
- **Data Transformation:**
 - Applying functions to data.
 - Merging and concatenating datasets.
- **Data Normalization:** Scaling data for analysis.
- **Outlier Detection:** Identifying and handling outliers.

Chapter 3: Data Analysis with Python

- **Descriptive Statistics:**
 - Mean, median, mode, standard deviation.
 - Correlation and covariance.
- **Grouping and Aggregation:**
 - groupby in Pandas.
 - Aggregating data with sum, mean, count, etc.
- **Time Series Analysis:**
 - Working with dates and times.
 - Resampling and rolling windows.

Chapter 4: Data Visualization

- **Matplotlib:**
 - Line plots, scatter plots, bar charts, and histograms.
 - Customizing plots with colors, markers, and annotations.
- **Seaborn:**
 - Advanced visualizations: heatmaps, pair plots, and violin plots.
 - Statistical plotting with `sns.regplot` and `sns.boxplot`.
- **Plotly:**
 - Interactive visualizations: 3D plots, animations, and dashboards.

Chapter 5: Advanced Python Techniques

- **List Comprehensions:** Writing concise loops.
 - **Lambda Functions:** Creating anonymous functions.
 - **Error Handling:** Using `try`, `except`, and `finally`.
 - **Working with APIs:** Fetching and parsing data from web APIs.
-

Module 8 – Trello (PMS)

Chapter 1: Introduction to Trello

- **What is Trello?:** Overview of Trello and its applications in project management.
- **Agile Workflows:** Understanding Agile and Scrum methodologies.
- **Trello Interface:** Boards, lists, and cards.

Chapter 2: Setting Up Trello

- **Creating Boards:** Organizing projects into boards.
- **Adding Lists and Cards:** Breaking down tasks into manageable units.
- **Labels and Tags:** Categorizing tasks for better organization.

Chapter 3: Collaboration and Workflow Management

- **Team Collaboration:** Adding members, assigning tasks, and setting deadlines.
- **Checklists and Attachments:** Adding subtasks and files to cards.

Chapter 4: Advanced Features

- **Trello Calendar:** Tracking deadlines and milestones.
- **Trello Dashboards:** Visualizing project progress with charts and metrics.

Chapter 5: Real-World Applications

- **Project Management:** Managing software development, marketing campaigns, or event planning.
- **Task Tracking:** Organizing personal or team tasks.

Module 9 – Soft Skills

Chapter 1: Communication Skills

- **Data Storytelling:** Presenting insights in a clear and compelling way.
- **Visual Aids:** Using charts, graphs, and dashboards to support your narrative.
- **Tailoring Messages:** Adapting your communication style for different audiences.

Chapter 2: Collaboration and Teamwork

- **Working in Teams:** Building trust and resolving conflicts.
- **Cross-Functional Collaboration:** Working with technical and non-technical teams.
- **Feedback:** Giving and receiving constructive feedback.

Module 10: Interview Preparation

- **Resume Building:** Highlighting your data analytics skills and projects.
- **Common Interview Questions:** Preparing for technical and behavioral questions.
- **Mock Interviews:** Practicing with peers or mentors.

Limited Time Offer:

- **Enroll Now & Get 30% Off!**
- **Free access to Practical Notes for Data Analytics.**

Your Data Career Starts Here – Don't Miss Out!