Besant Technologies

Data Analytics Training

1. Excel & Advance Excel
2. SQL
3. Power BI
4. Python

Add-on course with this Package

Live Online Classes

- ✓ Tableau
- ✓ Project
- ✓ Aptitude
- ✓ Spoken English

Average Salaries: ₹ 5L - ₹ 8L Per Annum

Hiring Companies: TCS, Accenture, Amazon , CISCO, Capgemini Etc

Course Fees: 30000+ Tax = ₹ 35400

Pay Once - Learn Until Job

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Excel and Advanced Excel

Module 1: Basic Excel (Duration: 10Hrs)

- Text to Columns
- Concatenate
- The Concatenate Function
- The Right Function with Concatenation
- Absolute Cell References
- Data Validation
- Time and Date Calculations
- Conditional Formatting
- Exploring Styles and Clearing Formatting
- Using Conditional Formatting to Hide Cells
- Using the IF Function
- Changing the “Value if false” Condition to Text
- Pivot Tables
- Creating a Pivot Table
- Specifying PivotTable Data
- Changing a PivotTables Calculation
- Filtering and Sorting a PivotTable
- Creating a PivotChart
- Grouping Items
- Updating a PivotTable
- Formatting a PivotTable
- Using Slicers
- Charts

- Creating a Simple Chart
- Charting Non-Adjacent Cells
- Creating a Chart Using the Chart Wizard
- Modifying Charts
- Moving an Embedded Chart
- Sizing an Embedded Chart
- Changing the Chart Type
- Chart Types
- Changing the Way Data is Displayed
- Moving the Legend
- Formatting Charts
- Adding Chart Items
- Formatting All Text
- Formatting and Aligning Numbers
- Formatting the Plot Area
- Formatting Data Markers
- Pie Charts
- Creating a Pie Chart
- Moving the Pie Chart to its Own Sheet
- Adding Data Labels
- Exploding a Slice of a Pie Chart
- Data Analysis – Overview
- types of Data Analysis
- Data Analysis Process
- Working with Range Names
- Copying Name using Formula Autocomplete
- Range Name Syntax Rules
- Creating Range Names
- Creating Names for Constants

- Managing Names
- Scope of a Name
- Editing Names
- Applying Names
- Using Names in a Formula
- Viewing Names in a Workbook
- Copying Formulas with Names
- Difference between Tables and Ranges
- Create Table
- Table Name
- Managing Names in a Table
- Table Headers replacing Column Letters
- Propagation of a Formula in a Table
- Resize Table
- Remove Duplicates
- Convert to Range
- Table Style Options
- Table Styles
- Cleaning Data with Text Functions
- Removing Unwanted Characters from Text
- Extracting Data Values from Text
- Formatting Data with Text Functions

Advance Excel (Duration: 15Hrs)

Module 2: Date Formats (Duration: 2Hrs)

- Converting Dates in Serial Format to Month-Day-Year Format
- Converting Dates in Month-Day-Year Format to Serial Format
- Obtaining Today's Date
- Finding a Workday after Specified Days

- Customizing the Definition of a Weekend
- Number of Workdays between two given dates
- Extracting Year, Month, Day from Date
- Extracting Day of the Week from Date
- Obtaining Date from Year, Month and Day
- Calculating Years, Months and Days between two dates

Module 3: Conditional Formatting (Duration: 2Hrs)

- Highlight Cells Rules
- Top / Bottom Rules
- Data Bars
- Color Scales
- Icon Sets
- New Rule
- Clear Rules
- Manage Rules

Module 4: Sorting (Duration: 2Hrs)

- Sort by Text
- Sort by Numbers
- Sort by Dates or Times
- Sort by Cell Color
- Sort by Font Color
- Sort by Cell Icon
- Sort by a Custom List
- Sort by Rows
- Sort by more than one Column or Row

Module 5: Filtering (Duration: 2Hrs)

- Filter by Selected Values

- Filter by Text
- Filter by Date
- Data Analysis with Excel
- Filter by Numbers
- Filter by Cell Color
- Filter by Font Color
- Filter by Cell Icon
- Clear Filter
- Advanced Filtering
- Filter Using Slicers

Module 6: Other Topics (Duration: 2Hrs)

- Subtotals with Ranges
- Subtotals
- Nested Subtotals
- Quick Analysis
- Quick Analysis with TOTALS
- Sum
- Average
- Count
- %Total
- Running Total
- Sum of Columns

Module 7: Lookup Functions (Duration: 3Hrs)

- Using the VLOOKUP Function
- Using VLOOKUP Function with range lookup TRUE
- Using VLOOKUP Function with range lookup FALSE
- Using the HLOOKUP Function
- Using HLOOKUP Function with range lookup FALSE

- Using HLOOKUP Function with range lookup TRUE
- Using the INDEX Function
- Using MATCH Function

Module 8: Pivoting (Duration: 2Hrs)

- PivotTables
- Creating PivotTable
- Recommended PivotTables
- PivotTable Fields
- PivotTable Areas
- Nesting in the PivotTable
- Filters
- Slicers
- Summarizing Values by other Calculations
- PivotTable Tools
- Using Pictures in Column Charts
- Band Chart
- Thermometer Chart
- Gantt Chart
- Waterfall Chart
- Sparklines
- Pivot Charts
- PivotChart from PivotTable
- PivotChart without a PivotTable
- Working with Multiple Sheets
- Multiple Worksheets with same Structure
- Creating a Formula across Multiple Worksheets
- Summarizing Data in Multiple Worksheets
- What-If Analysis

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SQL Training

Introduction to Oracle Database

- List the features of Oracle Database 11g
- Discuss the basic design, theoretical, and physical aspects of a relational database
- Categorize the different types of SQL statements
- Describe the data set used by the course
- Log on to the database using SQL Developer environment
- Save queries to files and use script files in SQL Developer

Retrieve Data using the SQL SELECT Statement

- List the capabilities of SQL SELECT statements
- Generate a report of data from the output of a basic SELECT statement
- Select All Columns
- Select Specific Columns
- Use Column Heading Defaults
- Use Arithmetic Operators
- Understand Operator Precedence
- Learn the DESCRIBE command to display the table structure

Learn to Restrict and Sort Data

- Write queries that contain a WHERE clause to limit the output retrieved
- List the comparison operators and logical operators that are used in a WHERE clause
- Describe the rules of precedence for comparison and logical operators
- Use character string literals in the WHERE clause
- Write queries that contain an ORDER BY clause to sort the output of a SELECT statement
- Sort output in descending and ascending order

Usage of Single-Row Functions to Customize Output

- Describe the differences between single row and multiple row functions
- Manipulate strings with character function in the SELECT and WHERE clauses
- Manipulate numbers with the ROUND, TRUNC, and MOD functions
- Perform arithmetic with date data

- Manipulate dates with the DATE functions

Invoke Conversion Functions and Conditional Expressions

- Describe implicit and explicit data type conversion
- Use the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
- Nest multiple functions
- Apply the NVL, NULLIF, and COALESCE functions to data
- Use conditional IF THEN ELSE logic in a SELECT statement

Aggregate Data Using the Group Functions

- Use the aggregation functions in SELECT statements to produce meaningful reports
- Divide the data in groups by using the GROUP BY clause
- Exclude groups of date by using the HAVING clause

Display Data From Multiple Tables Using Joins

- Write SELECT statements to access data from more than one table
- View data that generally does not meet a join condition by using outer joins
- Join a table by using a self join

Use Sub-queries to Solve Queries

- Describe the types of problem that sub-queries can solve
- Define sub-queries
- List the types of sub-queries
- Write single-row and multiple-row sub-queries

The SET Operators

- Describe the SET operators
- Use a SET operator to combine multiple queries into a single query
- Control the order of rows returned

Data Manipulation Statements

- Describe each DML statement
- Insert rows into a table
- Change rows in a table by the UPDATE statement
- Delete rows from a table with the DELETE statement
- Save and discard changes with the COMMIT and ROLLBACK statements
- Explain read consistency

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Use of DDL Statements to Create and Manage Tables

- Categorize the main database objects
- Review the table structure
- List the data types available for columns
- Create a simple table
- Decipher how constraints can be created at table creation
- Describe how schema objects work

Other Schema Objects

- Create a simple and complex view
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

Control User Access

- Differentiate system privileges from object privileges
- Create Users
- Grant System Privileges
- Create and Grant Privileges to a Role
- Change Your Password
- Grant Object Privileges
- How to pass on privileges?
- Revoke Object Privileges

Management of Schema Objects

- Add, Modify and Drop a Column
- Add, Drop and Defer a Constraint
- How to enable and disable a Constraint?
- Create and Remove Indexes
- Create a Function-Based Index
- Perform Flashback Operations
- Create an External Table by Using ORACLE_LOADER and by Using ORACLE_DATAPUMP
- Query External Tables

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Manage Objects with Data Dictionary Views

- Explain the data dictionary
- Use the Dictionary Views
- USER_OBJECTS and ALL_OBJECTS Views
- Table and Column Information
- Query the dictionary views for constraint information
- Query the dictionary views for view, sequence, index and synonym information
- Add a comment to a table
- Query the dictionary views for comment information

Manipulate Large Data Sets

- Use Subqueries to Manipulate Data
- Retrieve Data Using a Subquery as Source
- Insert Using a Subquery as a Target
- Usage of the WITH CHECK OPTION Keyword on DML Statements
- List the types of Multitable INSERT Statements
- Use Multitable INSERT Statements
- Merge rows in a table
- Track Changes in Data over a period of time

Data Management in Different Time Zones

- Time Zones
- CURRENT_DATE, CURRENT_TIMESTAMP, and LOCALTIMESTAMP
- Compare Date and Time in a Session's Time Zone
- DBTIMEZONE and SESSIONTIMEZONE
- Difference between DATE and TIMESTAMP
- INTERVAL Data Types
- Use EXTRACT, TZ_OFFSET and FROM_TZ
- Invoke TO_TIMESTAMP,TO_YMINTERVAL and TO_DSINTERVAL

Retrieve Data Using Sub-queries

- Multiple-Column Subqueries
- Pairwise and Nonpairwise Comparison
- Scalar Subquery Expressions
- Solve problems with Correlated Subqueries

- Update and Delete Rows Using Correlated Subqueries
- The EXISTS and NOT EXISTS operators
- Invoke the WITH clause
- The Recursive WITH clause

Regular Expression Support

- Use the Regular Expressions Functions and Conditions in SQL
- Use Meta Characters with Regular Expressions
- Perform a Basic Search using the REGEXP_LIKE function
- Find patterns using the REGEXP_INSTR function
- Extract Substrings using the REGEXP_SUBSTR function
- Replace Patterns Using the REGEXP_REPLACE function
- Usage of Sub-Expressions with Regular Expression Support
- Implement the REGEXP_COUNT function

Power BI

Introduction to Power BI

Learning Objectives: In this module, you will be introduced to what Power BI is, why to choose power BI, its building blocks, other various fundamental concepts of Power BI

Topics Covered:

- What is Power BI?
- Why Power BI?
- Benefits of Power BI
- Building Blocks of Power BI
- Fundamental Concepts of Power BI

Power BI Desktop

Learning Objectives:

In this module you will be introduced to Power BI Desktop, software installation and overview of software

Topics Covered:

- Software Installation Procedures and Guidelines
- Overview of Software
- Power BI Sign UP

- Introduction to Tools and Terminologies
- Refreshing Power BI Service Data
- What is a Dashboard?
- What is a Report?
- How to share Dashboard and Report?

Data Source Connection and Data Transforming

Learning Objective: In this module you will be introduced to how to connect to a data source, perform cleaning and transformation of data

Topics Covered:

- Connecting to a Data Source
- Upload a local CSV File
- Connect to Excel Data
- What is a Query Editor?
- Import Data vs Direct Query
- Data Cleaning and Data Transformation
- Merging and Appending

Hands-on:

Datasets will be provided for practicing how to load and perform cleaning and data transformation.

Modelling using Power BI

Learning Objective: In this module you will be introduced to data modelling, how to manage relationships, creating calculated columns, measures and quick measures

Topics Covered:

- Modelling of Data
- Manage Data Relationship
- Cardinality, Cross Filtering
- Default Summarization and Sort By
- Creating Calculated Columns
- Creating Quick Measures and Measures

Hands-on:

In this you will be given hands-on to work on datasets, create calculated columns, manage relationships etc.,

Learning Objective:

In this module you will be introduced to DAX

Topics Covered:

- What is DAX?
- Why is DAX Important?
- DAX Syntax
- Data Types in DAX
- Functions in DAX
- Measures in DAX
- Operators in DAX
- Tables and Filtering in DAX
- Queries in DAX
- Parameter Naming in DAX

Hands-on:

In this module hands-on will be given on various DAX functions

Data Visualization

Learning Objective: In this module you will be introduced to what is data visualization, importance of data visualization, creating charts using Power BI

Topics Covered:

- Creating Visualizations
- Colour Formatting
- Sort Order
- Scatter plot and Bubble Charts
- Tooltips
- Slicers
- Cross Filtering, Highlighting
- Report Level Filters
- Drill Down and Drill Up
- Hierarchies

- Conditional Formatting, Tables, and Matrices
- KPI's
- Cards and Gauges
- Map Visualizations
- Custom Visuals
- Grouping and Binning
- Selection Pane, Bookmarks & Buttons
- Z-Order

Hands-on:

In this module hands-on will be given on visualization, colour formatting, slicers, filters, grouping, selection pane etc.,

Reports and Dashboards

Learning Objective: In this module you will be introduced to modify reports and dashboards, ask questions to Power BI Q&A

Topics Covered:

- Modify and Print a Report
- Rename and delete report pages
- Add a filter to a page or report
- Set visualization interactions
- Print a report page
- Send a report to PowerPoint
- Create a Dashboard
- Create and manage dashboards
- Pin a report tile to a dashboard
- Pin a live report page to a dashboard
- Pin a tile from another dashboard
- Pin an Excel element to a dashboard
- Manage pinned elements in Excel
- Add a tile to a dashboard
- Build a dashboard with Quick Insights
- Set a Featured (default) dashboard

- Ask Questions about Your Data
- Ask a question with Power BI Q&A
- Tweak your dataset for Q&A
- Enable Cortana for Power BI

Hands-on:

In this module hands-on will be given on how to add filters to reports, set interactions, create dashboards etc.,

Publishing and Sharing Reports

Learning Objective: In this module you will be introduced to how to publish and share your dashboards and reports, saving options.

Topics Covered:

- Introduction to Sharing Options
- How to Publish Report From Power BI Desktop?
- How to Publish Report to Web?
- How to Share Dashboards Using Power BI Service?
- What is Content Pack?
- How to Save as PDF?
- What is Row Level Security?
- How to Export Data from Visualization?

Hands-on:

In this module hands-on will be given on how to share dashboard with Power BI service, how to save as PDF and exporting data from visualization

Tableau

Module 1: Tableau Course Material (Duration – 5 Hours)

- Start Page
- Show Me
- Connecting to Excel Files
- Connecting to Text Files
- Connect to Microsoft SQL Server

- Connecting to Microsoft Analysis Services
- Creating and Removing Hierarchies
- Bins
- Joining Tables
- Data Blending

Module 2: Learn Tableau Basic Reports (Duration – 5 Hours)

- Parameters
- Grouping Example 1
- Grouping Example 2
- Edit Groups
- Set
- Combined Sets
- Creating a First Report
- Data Labels
- Create Folders
- Sorting Data
- Add Totals, Sub Totals, and Grand Totals to Report

Module 3: Learn Tableau Charts (Duration – 4 Hours)

- Area Chart
- Bar Chart
- Box Plot
- Bubble Chart
- Bump Chart
- Bullet Graph
- Circle Views
- Dual Combination Chart
- Dual Lines Chart
- Funnel Chart
- Traditional Funnel Charts
- Gantt Chart
- Grouped Bar or Side by Side Bars Chart
- Heatmap

- Highlight Table
- Histogram
- Cumulative Histogram
- Line Chart
- Lollipop Chart
- Pareto Chart
- Pie Chart
- Scatter Plot
- Stacked Bar Chart
- Text Label
- TreeMap
- Word Cloud
- Waterfall Chart

Module 4: Learn Tableau Advanced Reports (Duration – 6 Hours)

- Dual Axis Reports
- Blended Axis
- Individual Axis
- Add Reference Lines
- Reference Bands
- Reference Distributions
- Basic Maps
- Symbol Map
- Use Google Maps
- Mapbox Maps as a Background Map
- WMS Server Map as a Background Map

Module 5: Learn Tableau Calculations & Filters (Duration – 6 Hours)

- Calculated Fields
- Basic Approach to Calculate Rank
- Advanced Approach to Calculate Ra
- Calculating Running Total
- Filters Introduction
- Quick Filters

- Filters on Dimensions
- Conditional Filters
- Top and Bottom Filters
- Filters on Measures
- Context Filters
- Slicing Filters
- Data Source Filters
- Extract Filters

Module 6: Learn Tableau Dashboards (Duration – 4 Hours)

- Create a Dashboard
- Format Dashboard Layout
- Create a Device Preview of a Dashboard
- Create Filters on Dashboard
- Dashboard Objects
- Create a Story

Module 7: Server (Duration – 5 Hours)

- Tableau online.
- Overview of Tableau Server.
- Publishing Tableau objects and scheduling/subscription.

Python

Introduction to Python:

Objective:

In this module, you will get a basic understanding of python programming, Virtual environment, Package manager, version differences of python programming and detailed knowledge about the python installation and environment setup for working with python.

Topic:

- Python programming history & features
- Python compiler and IDE installation

- Virtual Environment
- Pip – Package Manager

Hands-on:

How to set up an environment for python development.

Basics of Python:

Objective:

In this module, you will get a basic understanding of python Syntax and a detailed understanding of Input/Output [I/O] operations, Variables, Operators Datatypes and Data structure.

Topic:

- Python Syntax Overview, Indentation, comments
- Variable declaration
- Datatypes and data structure
    - Primitive
    - Non-primitive
- Operators in python

Hands-on:

How to write a basic Python code, variable declaration datatypes, and operators usage.

Program flow/ Data flow of Python:

Objective:

In this module, you will get a detailed understanding of conditional statements, looping, control statements of python.

Topics:

- Conditional Statements
    - if statement
    - if … else statement
    - if … elif… else statement
- Looping
    - for loop
    - for with else statement
    - while loop
    - while with else statement

- Control Statements
    - break
    - Continue
    - pass
- Assert Statement

Hands-on:

How to use conditional, looping and control statements in python.

Function in Python:

Objective:

In this module, you will get a detailed understanding of writing function, the scope of variables, function with arguments, keyword arguments, lambda functions and Modules in python.

Topics:

- Syntax of Function
- Function with *args & **kwargs
- Scope of variables
- Lambda function with map, filter, reduce method
- DocString
- Modules and standard Modules

Hands-on:

How to create and use functions and different types of argument, lambda function, and modules in python.

File Handling in Python:

Objective:

In this module, you will get a detailed understanding of file concepts like create, read, write, update, delete operation of file with python.

Topic:

- File Opening modes
- Context Manager in python
- File Operations
    - Open
    - Create

- Read
- Write
- Update
- Delete

Hands-on:

How to create and use file operation in python.

Exception Handling in Python:

Objective:

In this module, you will get a detailed understanding of exception handling and creating your own exception classes in python.

Topic:

- Types of Errors in python
- Exception handling with
  - try … except
  - try … except… finally
  - try … except… else
- Multiple Exception
- Raising Exception
- User-defined Exception

Hands-on:

How to create and use built-in and user-defined exception handling in python.

Oops in Python:

Objective:

In this module, you will get a detailed understanding of Object-Oriented Programming Concepts in python.

Topics:

- Oops Concepts with programming syntax
  - Class
  - Object
  - Polymorphism
  - Encapsulation
  - Inheritance

- Types of Methods in python

Hands-on:

How to use Object-oriented programming concepts in python.

Core Concepts in Python:

Objective:

In this module, you will get a detailed understanding of iterators, generators, decorators, in python.

Topics:

- Iterator
- Generator
- Decorator

Hands-on:

How to use core concepts and application of core concepts in python.

Comprehension in Python:

Objective:

In this module, you will get a detailed understanding of List, Dictionary comprehension and specialized sorts in python.

Topics:

- Comprehensions
    - List
    - Nested List
        - if statement
        - if ... else statement
        - Nested if ... else statement
- Dictionary
- Sorting
    - List
    - Dictionary

Hands-on:

How to use comprehensions and sorting in python.

Thread and DateTime in Python:

Objective:

In this module, you will get a detailed understanding of multi-threading concepts, datetime module alone with sleep and execution of code in python.

Topics:

- Terms in threading
  - process
  - thread
  - multithreading
  - Time complexity
- Thread Life cycle
- Programming with Threading & Multithreading
- Synchronization
- Sleep and execution time of code
- DateTime module

Hands-on:

How to use threading and data time concepts in python.

Advanced data Structure/ collections in Python:

Objective:

In this module, you will get a detailed understanding of advanced data structures in python.

Topics:

- Deque
- namedtuple
- ChainMap
- Counter
- Ordered Dictionary
- Default Dictionary

Hands-on:

How to use advanced data structure in python.

MySQL with Python:

Objective:

In this module, you will get a detailed understanding of SQL statements and database connection along with CRUD operation using python.

Topics:

- SQL statements & Operations
    - Create
    - Read
    - Update
    - Delete
- Python – SQL connector package installation
- Python with CRUD Operations
- Commit & Rollback
- SQL Related Exception Handling

Hands-on:

How to use and manipulate data in a database using python.

Network programming with Python:

Objective:

In this module, you will get a detailed understanding of Network programming, Client & server concepts with python.

Topics:

- Terms and Basics of network programming
- The architecture of data transmission between sender and receiver using python
- Getting data from the remote server
- Client & Server-side programming

Hands-on:

How to use and networking module of python, data transmission between client to server and server to client python.

Regular Expression with Python:

Objective:

In this module, you will get a detailed understanding of writing Regex with python.

Topics:

- Regex Syntax
    - Quantifiers
    - Metacharacters
    - Special Sequences

- Sets
- Python re module
- Methods with regex usage

Hands-on:

How to use and write regex in python.

GUI programming with Python:

Objective:

In this module, you will get a detailed understanding of developing the GUI application using the PyQt5 module with python.

Topics:

- Introduction
- Components and Events
- An Example GUI
- Widgets
- Layout Management
- Signals & Slots
- QMessagesBox, QDialog
- Database Handling

Hands-on:

How to develop a GUI application with PyQt5 and python.

API access with Python:

Objective:

In this module, you will get a detailed understanding of accessing open APIs using python.

Topics:

- Google Text to Speech
- Google Speech to Text
- OpenWeatherMap

Hands-on:

How to use open APIs using python.

DataScience with Python:

Objective:

In this module, you will get a Basic understanding of data science modules in python.

Topics:

- Pandas – Series and Dataframe
- Numpy
- Matplotlib

Hands-on:

How to use data science modules of python.

The project with Python:

Objective:

In this module, you are going to develop an application for own scenario.

Topics:

- Creating own application with any one of the frameworks
    - Django App
    - PyQt5 App
    - Console oriented Core app