

Module 1 - Python Course Syllabus

1) Introductory Sessions of python

- History of Python
- Introduction about Python
- Starting with Python
- Execute python script

2) Basic Data Types

- Indentations
- Data Types and Variables
- Operators
- Lists and Strings
- List Manipulations
- Shallow and Deep Copy

3) Advanced Data Types

- Dictionaries
- Set and Frozen sets
- Tuples
- Input from keyboard

Conditional Statements

- If-else Block
- Loops, While Loop
- For Loops
- Iterators and Iterables

5) Output Formatting

- Output with Print
- String Modulo
- Format Methods

6) Functions

- Introduction to Functions
- Recursions and Recursive Functions
- Parameter Passing in Functions
- Namespaces
- Global and Local Variables
- Decorators

7) File Operations

- Read and Write Files etc.
- Modules
- Packages

8) Advanced Python Concepts

- Regular Expressions
- Lambda, Filter & Map Operators
- List Comprehension
- Iterators and Generators
- Exception Handling
- Tests, DocTests & UnitTests

9) Object Oriented Programming

- Introduction
- Classes and Instances Attributes
- Properties v/s getters and setters
- Inheritance
- Abstract Classes

10) Powerful Utilities

- Multithreading
- Memory Management
- Logging Facility
- Argument Parser
- Invoking Sub process
- Lincache, fnmatch etc.

Module 2 - Sql Syllabus

- MYSQL Server Basics
- Database models
- ER Model Overview
- Data types
- Understanding Test Database
- Basics Queries
- Removing Duplicates
- Data Filters Using Operators
- Data Sorting
- Grouping
- Joins
- Arithmetic and String functions
- Advanced Functions

- SET Operators
- Creating Complex Queries
- DML operations - Insert, Update & Delete
- TSQL
- Database Objects - Create, Alter and Drop Tables
- Views
- Complex Views
- Indexes
- Advanced Indexes Concepts
- How Data is Stored
- Security - User Management
- Cursors
- Nested Cursors
- Functions
- Procedures
- Interoperability between Functions & Procedures

Module 3 - Data science with Python syllabus

Software Setup Instructions

- Installation and Instruction

A Crash Course in Python Part 1

- Data Types
- Strings in Python
- Variables and values
- Boolean Types
- Loops and decision Making
- Functions

A CRASH COURSE IN PYTHON PART 2

- Iterations
- Examples
- Data time Library
- Bucketing Library

Getting data from the Internet Part 1

- Getting datas from internet
- JSON
- XML
- Google API

Getting data from the Internet Part 2

- Beautiful soap
- Log in to web server

Database Basics

- Basics
- Normalizations

Database Basics: SQL

- SQL Integration with Python
- Working across multiple Tables

Data Analysis and Visualization: Part 1

- Numpy Intros
- Numpy with Analytics

Pandas Introduction

- Pandas Data Reader
- Google Finance Data
- Time Series Analysis

Data Analysis and Visualization: Part 2

- Data Cleaning
- Data Visualization

Data Analysis and Visualization: Part 2

- Sentiment Analysis
- Words Cloud
- Text analysis
- Topics on Modelling

Analysis of Networks

- Introduction to Network Analysis
- Construct a simple Network
- Graph Drawing
- Network Analysis Algorithm

Machine Learning with Python I

- Classifications of algorithm
- Regressions
- Assignments

Machine Learning with Python II

- K NN Algorithm
- Construct a simple Network
- Clustering
- Assignments

Module 4 - Tableau Course Syllabus

Section 1: Getting Started With Tableau course

- Introduction to Tableau and an overview of the different versions
- Installing Tableau Desktop

- Tableau Help and online resources

Section 2:

- Understanding Tableau User Interface
- Exploring Tableau File Types
- Understanding Green and Blue Pills
- Working with Available Data Sources
- Working with extracts instead of live connections

Section 3: Deep Diving With Data And Connections

- Working with Excel Data Interpreter
- Understanding Metadata and sharing data source connections
- Filtering data from your d
- Learning how to Split the fields
- Pivoting Data

Section 4: Creating Charts

- The Show Me Feature
- Crosstabs and Heat Maps
- Using Bar, Stacked Bar and Side-by-side Bars
- Pie Charts
- Line and Area Charts
- Working with Packed Bubble
- Using Tree maps
- Creating a Basic Scatter Plot
- Creating a Basic Maps

Section 5: Adding Calculations To Your Workbook

- Introduction to Calculations (this will explain the various flavours of calculations and the mechanics of calculations)
- Understanding Basics calculations
- Understanding String Calculations
- Learning about Boolean, If-Then calculations, and Case statements
- Understanding the Basics of Date Calculations
- Understanding Aggregation and Disaggregation
- Using calculations to add insight to your visualizations

Section 6: Mapping Data In Tableau

- Introduction to Mapping in Tableau

- Create a standard map view
- Dealing with map errors
- Customizing a standard map view
- Using filters in maps
- Quiz

Section 7: Dashboards And Stories

- Introduction to Dashboards
- Understanding Dashboard Actions
- Understanding Dashboard formatting basics
- Understanding Workbook level formatting (i.e. font styling, titles, lines)
- Assembling Your Dashboards Into A Story

Section 8: Visualizations For An Audience

- Focusing on the narrative
- Using colour with a purpose
- Understanding the importance of using tooltips for your audience
- Using a Parameter To Focus the Audience's Attention
- Removing clutter in your Dashboard
- How to export your dashboard to another file type

Module 5 - Power BI Course Syllabus

Module 1: Introduction to Power BI Course

- Get Started with Power BI
- Overview: Power BI concepts
- Sign up for Power BI
- Overview: Power BI data sources
- Connect to a SaaS solution
- Upload a local CSV file
- Connect to Excel data that can be refreshed
- Connect to a sample
- Create a Report with Visualizations
- Explore the Power BI portal

Module 2: Viz and Tiles

- Overview: Visualizations
- Using visualizations
- Create a new report

- Create and arrange visualizations
- Format visualization
- Create chart visualizations
- Use text, map, and gauge visualizations and save a report
- Use a slicer to filter visualizations
- Sort, copy, and paste visualizations
- Download and use a custom visual

Module 3: Reports and Dashboards

- Modify and Print a Reports
- 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 dashboards
- Build a dashboard with Quick Insights
- Set a Featured (default) dashboard
- Tweak your dataset for Q&A
- Enable Cortana for Power BI

Module 4: Publishing Workbooks and Workspace

- Share Data with Colleagues and Others
- Publish a report to the webs
- Manage published reports
- Share a dashboard
- Create an app workspace and add users
- Use an app workspace
- Publish an app
- Create a QR code to share a tile
- Embed a report in SharePoint Online

Module 5: Components and Table Relationship

- Use Power BI Mobile Apps
- Get Power BI for mobile
- View reports and dashboards in the app
- Use workspaces in the mobile app
- Sharing from Power BI Mobil

- Use Power BI Desktop
- Install and launch Power BI Desktop
- Get data
- Reduce data
- Transform data
- Relate tables
- Get Power BI Desktop data with the
- Power BI service
- Export a report from Power BI service to Desktop