



CERTIFICATE IN DATA ANALYTICS

DURATION: 90 Hours
TOTAL CREDITS: 3

COURSE SYLLABUS

Objective

The Certificate Course in Data Analytics aims to equip learners with the skills to collect, process, analyze, and visualize data using industry-standard tools. Participants will develop proficiency in statistical analysis, business intelligence, and data-driven decision-making to solve real-world problems across various industries.

Exit Profile

- Complete Knowledge in Data Analytics
- Knowledge in Data Visualization, Power BI, Python and Advanced Excel
- Design level knowledge

Career Path

- Data analyst
- Data Engineer
- Data Scientist
- Business Intelligence Analyst

Course Outline

Course Name:	Certificate in Data Analytics	Duration:	90 H
Module	Topic	Duration	Total Duration
Module 1	Introduction to Data analysis	5 H	90 H
	Data analysis tools in Excel	25 H	
	Data analytics with Python	30 H	
	Data analytics with power BI	20 H	
	Monitoring Job Application and Exploring Application of Data Analytics	5 H	
	Job profile creation, interview preparation	5 H	

Course In Detail

MODULE - 1

Data Analytics

- Introduction to data analysis and application
- Types of data analysis
- Tools used for data analysis

DATA ANALYSIS WITH EXCEL

- Importing and processing data
 - Removing duplicates
 - Removing unwanted characters
 - Replacing characters
 - Formatting values, dates
- Sorting
 - Sorting by text
 - Sorting by number
 - Sorting by cell color
 - Sorting by date or time
 - Sorting by customized list
- Filtering
 - Filtering by selected values
 - Filtering by text
 - Filtering by date or time
 - Advance filters
- Quick Analysis
 - Total
 - Sum
 - Average
 - Percentage
 - Interest calculations
 - Conditional Analysis
- Look-Up Functions
 - Vlook-up function with range lookup true
 - Vlook-up function with range lookup false
 - Hlook-up function with range lookup true
 - Hlook-up function with range lookup false
- Pivot Table
 - Pivot table tools
 - Analyze
 - Design
 - Report presentation style

- Data Visualization
 - Chart elements and chart style
 - Gantt Chart and other charts
 - Pivot chart from pivot table
 - Pivot chart without pivot table

DATA ANALYTICS WITH PYTHON

- Introduction to Jupiter Notebook and Google Colab
- Basics of python coding for beginners
- Mathematical operations with python
- Basics of list, dictionaries, tuple
- Pandas and numpy
- CSS Styling
- Python libraries for data analysis and visualization Sklearn, Seaborn, Matplotlib etc
- Unstructured data, semi structured data and structured data
- Sampling of Data with python – Random sampling, stratified sampling
- CSS hacking
- CSS Summary

DATA ANALYTICS WITH POWER BI

- Introduction to Microsoft Power BI Installation and configuration
- Setting up new dashboard
- Importing Data
- Data Preparation
- Setting Data types
- Adding calculated columns
- Visualizing data in charts and table
- Natural language queries
- Changing layout and format
- Adding tables and charts
- Relationships in table
- Spatial visualization

MONITORING JOB APPLICATION AND EXPLORING APPLICATION OF DATA ANALYTICS

- Data analytics in different types of data – text, numerical, image, speech
- Understanding datasets for supervised learning and unsupervised learning
- Understanding the application of Data Analytics in Machine learning projects
- Understanding the application of Data Analytics in Business Improvements
- Application of Data Analytics in Real time projects in various industries

INTERVIEW PREPARATION GUIDELINES AND MOCK INTERVIEW AND REVIEW