Savitribai Phule Pune University

(Formerly University of Pune)

Department of Technology
(A Programme under Department of Technology, SP Pune University)

Curriculum Structure for

Professional Certification Programme

in

DATA ANALYTICS AND BUSINESS INTELLIGENCE CERTIFICATION
PROGRAM (CPDABI)

Course Name: Professional Certification Programme in Data Analytics and Business Intelligence

Duration: 3 Months

Savitribai Phule Pune University

(Formerly University of Pune)

Department of Technology

Board of Studies, Computer and Information

Technology(CI)

Curriculum Structure for Professional Certification

Programme in

DATA ANALYTICS AND BUSINESS INTELLIGENCE

Sr. No.	Subject Code	Subject Name	Credits	Teaching Scheme (Theory)	Teaching Scheme (Practical)
1	CPDABI1	Introduction to Business Intelligence (BI)	4	√	√
2	CPDABI2	Data Modelling	4	√	√
3	CPDABI3	Power BI Service (Cloud), Q & A And Data Insights	4	√	√
4	CPDABI4	Power BI Advance & Power BI Premium	6		
		Total Course Credits	**18**		

TAKE AWAY'S AFTER COMPLETION OF COURSE

Become an industry ready Expert with Professional Certification Programs in Data Analytics And Business Intelligence; And transform your career in 3 months. Course provides a high-engagement learning experience with real-world applications and is designed for individuals who want to start a new, more fulfilling challenging distinct career.

Program Curriculum

<table>
<tr><td>Teaching Scheme:
Scheme:</td><td>Examination</td></tr>
<tr><td>Lectures: 4 hrs/ week
40 Marks</td><td>Assignment/Quiz:</td></tr>
<tr><td>Tutorial:
Marks</td><td>End Exam: 60</td></tr>
</table>

CPDABI

Introduction to Business Intelligence (BI)

INTRODUCTION TO POWER BI:

Introduction to Business Intelligence (BI), Stages of business intelligence (BI), Use cases of BI, Various BI tools, Overview of Data warehouse & concepts, Introduction to Power BI, Why Power BI, Power BI Components, Power BI pricing structure, Building blocks of Power BI, Architecture of Power BI, Power BI vs Tableau vs QlikView, Introduction of Power BI,Desktop Installation of Power BI Desktop, The key features of Power BI workflow, Process of creating reports in Power BI.

DATA EXTRACTION: Overview of Power BI desktop, Data sources in Power BI, Using files (excel, pdf, csv, etc.) as a data source, Using SaaS connectors, Extracting data from folders, and databases, Working with Azure SQL database and database sources, Connecting to Analysis Services, Other data sources (OData, web, SharePoint etc.), Python & R script in Power BI, Introduction of power query editor, Advance editor, Query dependency editor

DATA TRANSFORMATION – SHAPING & COMBINING DATA: Shaping data using Power Query, Editor Formatting data, Transformation of data, Understanding of Data types Data profiling for data quality check, Naming conventions & best practices to consider, Identify and create appropriate keys for joins, Working with Parameters, Merge Query, Append Query, Group by of data (aggregation of data),Applied steps (query settings),Duplicate & Reference tables, Transpose of data, Fill, Pivot & Un-pivot of data ,Custom columns, Conditional columns, Replace data from the tables, Split columns values, Move columns & sorting of data, Detect data type, count rows & reverse rows, Promote rows as column headers, Hierarchies in Power BI, M query, CDA&BI -02

DATA MODELLING

DATA MODELLING:

Introduction of relationships, Creating relationships, Cardinality, Cross filter direction, Use of inactive relationships, Introduction of DAX, Why DAX is used, DAX syntax, DAX functions, Context in DAX, Calculated columns using DAX, Measures using DAX, Calculated tables using DAX, Learning about table, information, logical, text, iterator, Time intelligence functions (YTD, QTD, MTD), Cumulative values, calculated tables, and ranking and Rank over groups, Date and time functions Identify poorly performing measures, relationships, And visuals, DAX advanced features

DATA VISUALIZATION WITH ANALYTICS: Deep dive into Power BI data visualization, Understanding Power View and Power Map,Data visualization techniques, Page layout & Formatting, Power BI Desktop visualization, Formatting and customizing visuals, Visualization interaction, Custom visualization in Power BI, Top-down and bottom-up analytics, Drill down, Drill through, Filter pane, Slicers, Use of Hierarchies in drill down analysis, Theme for corporate standards, Power BI template for design reusability

CPDABI 3: POWER BI SERVICE (Cloud), Q & A AND DATA INSIGHTS

POWER BI SERVICE (Cloud), Q & A AND DATA INSIGHTS:
Introduction to Power BI Service, Introduction of workspaces, Dashboard, Creating & Configuring Dashboards, Dashboard theme, Reports vs Dashboards, Building workspace Apps, Sharing reports & dashboards, configure subscriptions and data alerts, Paginated report and Introduction to Power Q & A

POWER BI SETTINGS, ADMINISTRATION & DIRECT CONNECTIVITY:
 Getting to understand Power BI Desktop settings, Aggregating data from multiple data sources
Power BI Service settings, Power BI Admin Portal, Administration activities, Power BI usage analysis, Introduction of Office 365 admin activities, Introduction of Data Gateway, Installation & Configuration of data gateways, Scheduling auto data refresh, Managing groups, row-level security, datasets, reports and dashboards, Real time data analysis using Direct Connectivity, Direct Query vs Import Mode.

EMBEDDED POWER BI WITH API & POWER BI MOBILE
Introduction to embedded Power BI, Create embedded code, Manage embedded code, Integration of Power BI in SharePoint, Introduction of Power BI API, Power BI Embedded playground, Introduction to Power BI Mobile, Creating mobile based reports & dashboards, Optimizing report for Power BI mobile app, Features of Power BI mobile app, Introduction of integrating Power BI & Excel, Power BI Analyze in Excel

<div align="center">

CPDABI4
POWER BI ADVANCE & POWER BI PREMIUM

</div>

POWER BI ADVANCE & POWER BI PREMIUM:

Introduction of Power BI Premium, Power BI Premium per user, Power BI Premium features, Introduction to Data Flow, Create Data Flow, Advantages of Data Flow, Create reports using Data Flow, Introduction to Power BI Deployment Pipelines, Create Deployment Pipelines Benefits of Deployment Pipelines, Introduction of Sensitivity Labels, Introduction of Power BI Goals feature, Incremental data load in Power BI, Use AI visuals, Use the Forecast feature, Power BI best practice rules to improve performance