DEPARTMENT OF SOFTWARE DEVELOPMENT
B.VOC(SD)

Syllabus

CERTIFICATE COURSE IN DATA VISUALIZATION WITH POWER BI DESKTOP

Pune District Education Association's

Baburaoji Gholap College, Sangvi, Pune-27.

Second Year –B.VOC(SD)

(To be implemented from Academic Year 2023-2024)

CERTIFICATE COURSE IN DATA VISUALIZATION WITH POWER BI DESKTOP

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"SYLLABUS STRUCTURE"

Course Type	Course Code	Paper Title	Credit		Evaluation		
			Theory (T)	Practical (P)	Theory Exam(TE)	Practical Exam (PE)	Total
CCPB	CCPB26	CERTIFICATE COURSE IN POWER BI	1	1	30	40	60

COURSE OBJECTIVE:

- Understand the fundamentals of business intelligence and data visualization.
- Familiarize students with Power BI Desktop interface and features.
- Learn to import data from different sources into Power BI.
- Understand data cleaning and transformation techniques.

COURSE OUTCOME:-

- Proficiency in navigating Power BI Desktop.
- Understanding the role of Power BI in data visualization.
- Ability to import data from various sources into Power BI.
- Competence in cleaning and transforming data using Power BI tools.

MODULE	TOPIC	Duration
Introduction to Power BI	Introduction to Business Intelligence • Introduction to Power BI • Power BI vs. Tableau • Uses of Power BI • The Flow of Work in Power BI • Working with Power BI • Basic Components of Power BI • Introduction to Building Blocks of Power BI • Data model and importance of Data Modelling • Power BI Installation and Connecting Data(Get Data).	

	• Understanding the power bi tools.	

Data Sources Connectivity	Data Sources in Power BI Desktop
	• Loading Data in Power BI Desktop
	  a)Types of Data Connectors
	  b)The Query Editor
	  c)Date Filters
	  d)Date Transformation Columns
	• Views in Power BI Desktop
	• Query Editor In Power BI
	• Transform, Clean, Shape
	• Model Data
	  a)Creating calculated Columns
	  b)Creating calculated measures
	  c)calculate and Filter Function
	• Manage Data Relationship
	• Editing a Relationship
	• Data Filter, Text Filter, Cross Filter Direction
	• Saving Work file
	• Measures , Dimensions ,Parameters, and Calculated Field
	• Creating List Reports	

Data Analysis Expression (DAX)	Introduction to DAX • Importance of DAX • Data Types in DAX • DAX Calculation Types • Steps to Create Calculated Columns • Measures in DAX • DAX Syntax • DAX Functions • DAX Operators • DAX Tables and Filtering	

	Introduction to Visuals In Power BI
	• Visualization Charts in Power BI
	  a)Stacked Charts and Clustered Charts
	  b)Line Charts, Area Charts, Bar Charts
	  c)100% Stacked Bar and Column Charts
	  d)Map Visuals: Tree, Filled, Bubble	

Data Visualization	e)Cards ,Funnel, Table f)Scatter Charts: Label, Play Axis g) Waterfall Charts • Slicers and Map Visualizations • Modifying Colors in Charts And Visuals • Shapes, Text Boxes, and Images • Custom Visuals • Page Layout and Formatting • Bookmarks and Selection Pane • KPI Visuals • Shapes, Markers, Axis, Plot Area	
Power BI Services	Introduction to Power BI Service • Overview of Dashboards and Services • Filtering Dashboards in Power BI • Sharing Dashboards • Power BI Q&A • Publishing to Web • Bookmarks and buttons	
Power BI Report Server	What is Power BI Report Server? • Key Features of Report Server • The architecture of the Report Server • Limitations of Report Server • Power BI Report Server vs. Power BI Service • What is a Web Portal? • Row Level Security	
Project	Power BI Service • Row Level Security • Visuals and Charts • Power BI Desktop • Publish BI Reports	
	Total	**60hr**

EXAMINATION AND EVALUATION:
ELIGIBILITY:
A candidate is eligible for admission to the Certificate Course Intellectual Property Rights after passing 12th Std. examination (H.S.C. 10 +2) from any stream or equivalent.

EXAMINATION PATTERN:
Internal Assessment:-
1. 40 percent of the total assessment will be done by internal examination.
2. One internal examination will be conducted for theory in mid time of the course.
3. The pattern of examination will be oral for theory.
4. The practical assessment is done on the basis of the assignments submission during the practical session.
5. Subject teachers have to design assignments for students according to syllabus during practical session.
6. The in-house teachers are responsible for conduction and coordination of the internal theory as well as practical examination.

Term end examination:
1. 60 percent of the total assessment will be done in term end examination.
2. There will be 3 hours practical exam and 1 hour oral exam for each student.
3. Examiners: 2 lecturer level examiners will be appointed (one internal examiner and one external examiner)

Setting of Question Papers (Applicable to theory subjects)
1. A candidate shall have to answer the questions in all the subjects in English only.
2. Question papers shall be framed so as to ensure that no part of the syllabus is left Out of study by a candidate.
3. Question paper shall be balanced in respect of various topics outlined in the Syllabus.
4. The question papers shall have a MCQ type Questions.

AWARD OF CREDITS:
Each course having 2 credits shall be evaluated out of 100 marks and student should secure at least 40 marks to earn full credits of that course.

GRADATION:
Gradation is according to following formula.

New Grades		
Percentage Marks	Grade	Grade Points
0	F	1
40	E	2

45	D	3
50	C	4
55	B	5
65	A	6
75	O	7

CERTIFICATION:
The college needs to provide 'Course Completion Certificate' to every student who completes the course successfully. The certificate must contain the grade obtained by the student in the examination.

Dr. Balkrishna N. Zaware
Principal
Baburaoji Gholap College, Sangvi, Pune-27.

IQAC   Short Term Course Coordinator
(Dr. Sangeeta Jagtap)   (Prof. Vijay Ghare)
Baburaoji Gholap College, Sangvi, Pune-27.   Baburaoji Gholap College, Sangvi, Pune-27.

HoD   Course Coordinator
(MS. Sonal.A.Kadam)   (_____)
Department of Software Development   Department of Software Development
Baburaoji Gholap College, Sangvi, Pune-27.   Baburaoji Gholap College, Sangvi, Pune-27.

Industry Expert   Subject Expert