FACULTY OF VOCATIONAL STUDIES

SYLLABUS FOR

Certificate Course: AI-Visualization Specialist

Session: 2022-23

The Heritage Institution

KANYA MAHA VIDYALAYA JALANDHAR
(Autonomous)

Certificate Course: AI -Visualization Specialist

Semester I						
Course Code	**Course Name**	**Course Type**	**Marks**			**Examination time (in Hours)**
			Total	**Ext.**		
				L	**P**	
	AI-Visualization Specialist	C	100	50	50	3 (Theory: 1 hour, Practical: 2 hours)
Total			100			

PROGRAMME OUTCOMES OF AI-Visualization Specialist

Upon Completion of this Course the student should be able to:

PO1: Elaborate the various occupations in the field of AI and Data analytics and the impact of these on organizations and businesses.

PO2: Define basic statistical concepts used for analysis such as measures of central tendency like mean, median, or mode, or statistical anomalies like missing values, bias, or outliers.

PO3: Understand usage of various plots and charts during Visualization.

PO4: Work on Tableau Dashboards

AI-Visualization Specialist
COURSE CODE:

Time: 3 Hours (Theory 1 hour, Practical: 2 hours)	Max. Marks: 100 Theory: 30 Practical:50 CA:20

Instructions for the Paper Setter

Theory: An objective type question paper will be set for assessment of the candidate with equal weightage from all the units of the syllabus.
Practical: The paper will be set on the spot by the examiner.

Unit-I

Introduction to Artificial Intelligence and Big Data Analytics, Career opportunities, Applications of AI and Big Data analytics. Steps of Data Analysis, Data Visualization: Introduction of Data Visualization, Importance of Data Visualization, Key roles of Visualization Specialist.

Unit-II

Statistical concepts: Descriptive statistics including measures of central tendency such as mean, median and mode, correlation techniques such as Pearson's Correlation Coefficient, Methods of Least Squares, Different techniques for regression analysis including linear, logistic, ridge, lasso, distinguish between different probability distributions such as Normal, Poisson, Exponential, Bernoulli, Hypothesis testing to draw inferences and measure statistical significance
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Unit-III

Basic Visualization tools - Area Plots, Histograms, Bar Charts, Specialized Visualization tools - Pie Charts, Box Plots, Scatter Plots, Bubble Plots. Charts and their applicability for different data types. Advanced Visualization tools - Waffle Charts, Word Clouds.

Unit-IV

Creating Visualizations, reporting results, Basic functions and libraries for Data analysis, Introduction to Tableau, Connecting to excel file, Data blending, Tableau charts, Tableau Dashboards.

Software: Tableau