**SYLLABUS**

**Google Sheets**

Module 1. **Basics**

* Basics
* Preparation
* Formatting
* Calculation
* Automate

Module 2. **Functions**

* IF
* VLOOKUP
* COUNTIF
* COUNTIFS
* SUMIF
* SUMIFS

Module 3. **Pivot tables and dashboards**

* Introduction to Pivot Tables
* Analyzing data using pivot table
* Putting it all together

**PROJECTS**

* Create reports for a retail store brand
* Group project for video content platform

**SQL**

Module 1. **Operators and Queries**

* Introduction to SQL and its terminology
* Basics
* Working with Operators
* Working with Strings & Datetime
* Mastering complex SQL Queries with basic statements

Module 2. **Advanced Queries**

* Aggregate functions
* HAVING clause
* SQL Joins
* Sub Queries

Module 3. **Advanced functions**

* Windows functions
* CONTROL FLOW FUNCTIONS
* HANDLING NULL VALUES
* DATABASE NORMALIZATION

**PROJECTS**

* Project for an investment bank
* Project for YouTube video trends

**Midterm exam 1**

**Statistics**

Module 1. **Basics**

* Intro to statistics
* Central tendency, variance
* Inferential Statistics
* Types of Probability Distribution

Module 2. **Data and hypothesis**

* Exploratory data analysis
* Data Preprocessing
* Hypothesis testing (parametric tests)
* Chi square test and 1 way ANOVA

**PROJECT**

* Project for a bank

**Power BI**

Module 1. **Setup and dashboards**

* Introduction to Power BI
* Connecting to data sources and Creating basic charts and visuals
* Cleansing data with Query Editor
* Creating Report by combining all visuals
* Types of Visuals in Power BI
* Managing Relationships between Tables in Power BI
* Addition of New columns using Power Query
* Transforming Columns in Query Editor

Module 2. **Modeling and Optimization**

* Modeling and Optimization
* Customisations
* Interactions
* Introduction to DAX

**PROJECTS**

* Project for a Finance department of a company
* Project on supply chain domain to optimize the supply and profit

**Midterm exam 2**

**Python**

Module 1. **Operators and functions**

* Introduction
* Installation
* Basic operators
* Brief on Jupyter notebook
* Data types, variables, and Numbers
* Strings
* List
* Conditional statements if/else
* Looping
* Functions

Module 2. **Arrays**

* Introduction on Numpy
* Creating arrays
* Indexing arrays
* Array Transposition
* Shape manipulation
* Conditional Selection
* Array Operations
* Broadcasting

Module 3. **Datasets and dataframes**

* Introduction to pandas
* Reading local data set
* How to read data files from pandas
* How to write data using Pandas
* Creating dataframe
* Playing with Rows and columns of dataframe
* Filters and operations using dataframe
* Handling missing values using Pandas
* Usage of apply function in pandas
* Aggregate data in Pandas
* Merge operation on dataframes

Module 4. **Plots and charts**

* Introduction to Matplotlib
* Basics of Matplotlib figure
* Creating Line Plots
* Adding texts to plots
* Adding legend
* Adding labels
* Applying different styles
* Subplots
* Scatter Plot
* Bar chart
* Pie Chart
* Histogram
* Heat map
* Plotting Curves
* Brief on visualization python libraries

**PROJECTS**

* Project for a Global Health
* Project for a Fleet Maintenance

**Final exam**

**Career development**

Module 1. **CV and Portfolio**

* CV preparation
* LinkedIn profile
* Portfolio

Module 2. **Mock interviews and job search**

* Interview preparation
* Job search and application