

Course Blocks	Chapters	Topics	Content	Hours	
TERM 1 (FOUNDATION OF STATISTICS FOR DATA SCIENCE)	STATISTICS	What is Data Science	Data Science?	2	
			Skills required for data science		
			Applications of data science in different industries		
	STATISTICS	Statistics for Data Science	What is Statistics and use of Statistics in DS?		
			Population and Sample		
			Parameters and Statistics		
			Data types		
			Variable and it's types		
			Sampling Techniques		
			-Convenience Sampling		
	All about Data	Introduction to Data	-Simple Random Sampling		
			-Stratified Sampling		
			-Systematic Sampling		
			-Cluster Sampling		
			What is Univariate and Bi Variate Analysis?		
			Measures of Central Tendencies		
	All about Data	Descriptive Statistics	Measures of Dispersion		
Skewness and Kurtosis					
Outliers and Boxplot					
Covariance and Correlation			2		
<i>Assignments</i>					
Basics	Introduction	Why to use Excel MS Excel Basic Features and Functions Editing and Formatting data Working with Worksheets	1		
		Custom Formatting Conditional Formatting	1		
	Functions and Formulas	Logical Functions Lookup and Reference Functions Statistical Functions	1		
		What are Pivot Tables Analysing Data using Pivot Table: Grouping Filters Slicers Custom Calculating Calculated Field			
	Pivot Tables				

TERM 2 : FUNDAMENTAL FOR DATA ANALYSIS	Advanced	Dashboarding	Creating Chart in Excel Designing Column Charts Chart Formatting Interactive Dashboards	1
	Analytics with Excel	Analytical Tools of Excel	What If Analysis: Goal Seek Scenario Manager Data Tables Solver	2
		Statistical Analysis	Moving Average Hypothesis Testing Anova Covariance Correlations Regression	
	<i>Assignments</i>			
TERM 3: DATA VISUALIZATION & STORY TELLING	PowerBI With Casestudy	Getting started	Installing PBI	1
			Understanding PBI Interface	
		Connecting to Data	Connecting PBI to various datasets like Excel,CSV files	1
			Connecting to web	
			Implementing data blending and aggregation	1
		Visualization	Creating and designing visualizations and dashboards	1
			PBI graphs like Bar Charts, Area Charts, Maps , Scatterplots , Treemaps Piecharts, Heat map, waterfall, Pareto	
		Joins and Calculations	Understanding Types of Joins and how they work	1
			PBI calculations- Arithmetic, logical, LOD calculations	
			PBI generated fields and special fields	1
		Report making and sharing	PBI reports	1
			Adding Actions to Dashboards (filters & highlighting)	
			Exporting Results from PBI into Powerpoint, Word, and other software	1
<i>Assignments</i>				
		Introduction	What is Database	
			Intro to SQL	

TERM 3: DATA PIPELINE PROCESSING & EXTRACTION

SQL (Basics +  
Advanced)

Basics	Datatypes in SQL
Constraints in SQL	Inserting and extracting data
	Foreign Key
	Unique
Clauses	Default
	Top
	Group By
Operators	And , Or , Not
	Like, Aliases , Wildcards
Joins	Inner join
	Right join
Commands to change tables	Self join
	Alter
Functions	Data Processing Pipelines
	Experince with HIVE/IMPALA/POSTGRES Databases
	window functions

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<i>Assignments</i>					
TERM 4: DATA VISUALIZATION & STORY TELLING	PowerBI With Casestudy	Getting started	Installing PBI		
			Understanding PBI Interface		
		Connecting to Data	Connecting PBI to various datasets like Excel,CSV files		
			Connecting to web	1	
			Implementing data blending and aggregation		
		Visualization	Creating and designing visualizations and dashboards	2	
			PBI graphs like Bar Charts, Area Charts, Maps , Scatterplots , Treemaps Piecharts, Heat map, waterfall, Pareto		
		Joins and Calculations	Understanding Types of Joins and how they work	1	
			PBI calculations- Arithmetic, logical, LOD calculations		
			PBI generated fields and special fields		
		Report making and sharing		PBI reports	1
				Adding Actions to Dashboards (filters & highlighting)	
				Exporting Results from PBI into Powerpoint, Word, and other software	1
<i>Assignments</i>					