

Course Objective

- To develop fundamental knowledge of concepts underlying data science projects.
- To develop practical skills needed in modern data analytics.
- To give a hands-on experience with real-world data



Contents

Module 1: Data Analytics – An Insight (8 Hours)

Introduction
Data Evolution – At Glance
Data Science
Data Analytics
Big Data Analytics
Big Data Applications
Data Analytics case study

Module 3: Data Visualisation in Python (9 Hours)

Introduction
Exploratory Data Analytics
Lattice Pacakage
Datasets
Histogram
Density Plot
Box Plot
Bar Chart
Strip plot and different plots

Module 2: Exploring Python Basics (9 Hours)

Interactive Execution
Programs in Python
Functions
Strings
Dictionaries
Files
Classes
Functional Programming

Module 4: Regression Analysis with Case study (10 Hours)

Introduction
Case study – 1 Simple Linear Regression
Multiple Linear Regression
Case study – 2 Multiple Regression Analysis- PIMA dataset
Diagnostic Plots
Prediction and Confidence Intervals
Case study-3 benign breast disease dataset
Deviation analysis
visualization

Duration

12 weeks course, 3 lectures per week for 12 weeks
Total 36 hours

Faculty

Dr. Sanjeev Goyal, Asst. Prof. (Mechanical Engineering)
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Skill Set Gain

Developed fundamental knowledge of Data Science.

Developed Practical data analysis skill.

Hands on experience and real world data analysis.

