



SYMBIOSIS SCHOOL FOR ONLINE AND DIGITAL LEARNING

Symbiosis International (Deemed University)

COURSE DETAILS

Name of the Programme : Master of Science (Data Science)
Semester : I
Course Name : Data Analysis Using Python
Course Code : T3577
No. of Credit : 2

Learning Objectives:

The objective of this course is to learn data analysis techniques in python and effectively apply them in real life applications.

Pre-requisites:

Basics of python

Course Outline:

Module No.	Topic
1	Numpy: Arrays, Scalars, Array Processing ,Array input, output
2	Introduction to pandas: Series, Data Frame, Index, Rank, sort, Data Alignment, Missing data, Reading and Files, JSON,HTML,MS Excel files
3	Working with databases: Relational, NOSQL
4	Merge, concatenate, Reshape, pivot, Mapping, Rename, replace, binning, outliers, Permutation, Group by Data frames, Group by dictionary, series,Aggrigation,cross tabulation,Time Series analysis



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Books Recommended:

1. Python pandas documentation: <http://pandas.pydata.org/pandas-docs/stable/tutorials.html>
2. Python Data Analysis - Second Edition 2nd , Kindle
3. Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython Book by Wes McKinney, O'Reilly Media
4. Data Science from Scratch, First Principles with Python, By Joel Grus, Publisher: O'Reilly Media