

Title of the Course	Python for Data Science: A Project Based Approach
TAC No.	CSE-4 (Skill Oriented)
Dates and Venue	30 November – 04 December, 2026 NITTTR, Chandigarh
Course Outcomes	Participants will be able to: • Understand the basic concepts of the Python Programming including data structures • Use Python essential libraries like NumPy for numerical computing, and Pandas for data analytics • Learn File Handling, Data collection, and Data pre-processing • Visualize data using Matplotlib and Seaborn library • Implement data science workflow using benchmark datasets
Course Contents	• Introduction to Python Programming • Python Data Structures: Lists, Tuples, and Data Dictionaries • Introduction to Data Science, NumPy, and Pandas library • Data Visualization and plotting using Matplotlib and Seaborn library • Data Collection and Integration • File handling: text, CSV, Excel, etc. • Data Pre-processing: Handling missing values, duplicate values, and inconsistent data • Encoding of features, feature scaling, and feature selection • Outlier Detection and treatment, handling imbalanced data • Project for learning data science workflow using benchmark datasets • Case study on Linear regression, logistic regression, classification and clustering algorithms.
Course Coordinator(s)	Dr. Shano Solanki, Associate Professor, CSE Email-id: shano@nitttrchd.ac.in Mobile: 9872920296