

Data Analysis with Python —formula

Level: Intermediate

Duration: 6 weeks (12 sessions × 40 min each ≈ 8 hours)

Audience: Learners with basic Python and pandas knowledge

Course Goal: Teach students how to clean, manipulate, and analyze datasets using Python to extract actionable insights.

Course Fees:

- **Self-paced:** \$100
- **Instructor-led (12 sessions):** \$150

Weekly Breakdown:

1. Week 1: pandas Series & DataFrames
2. Week 2: Filtering & aggregation (groupby)
3. Week 3: Handling missing & categorical data
4. Week 4: NumPy for numerical operations
5. Week 5: EDA – visualization & insights
6. Week 6: Mini-project: Analyze dataset & summarize results

Learning Objectives

By the end of this course, students will be able to:

- Work efficiently with **pandas Series and DataFrames** for data handling.
- Filter, aggregate, and group data to summarize information.
- Handle missing, categorical, and numerical data effectively.
- Perform numerical operations using **NumPy**.
- Conduct exploratory data analysis (EDA) and visualize insights.
- Apply all skills in a **mini-project** to analyze a dataset and summarize findings.

End-of-Course Deliverables:

- ✓ Cleaned and preprocessed dataset
- ✓ Python notebook with documented analysis code
- ✓ Exploratory data analysis (EDA) visualizations
- ✓ Summary report of key insights and observations
- ✓ Completed mini-project applying all techniques
- ✓ Optional GitHub submission for sharing work