Programming Basics and Data Analytics with Python

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Course Introduction

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Why Python for Data Analytics?

Flexible
Helps developers to script applications and websites

Easy to learn
Uses only a few lines of code to accomplish tasks

Open-source
Uses a community-based model for development

Well-supported
Has plenty of analytics libraries available

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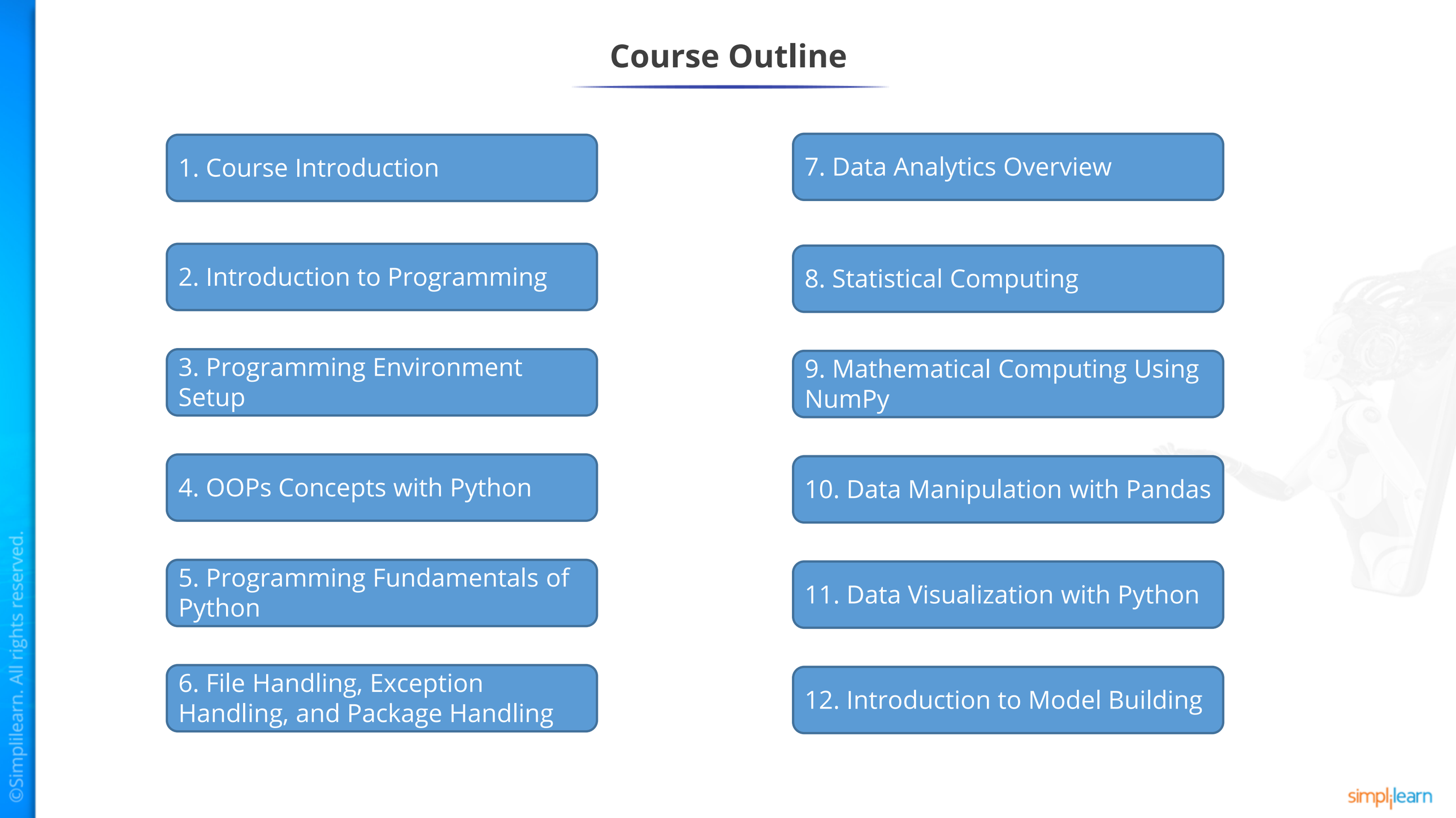
Course Outline

1. Course Introduction
2. Introduction to Programming
3. Programming Environment Setup
4. OOPs Concepts with Python
5. Programming Fundamentals of Python
6. File Handling, Exception Handling, and Package Handling
7. Data Analytics Overview
8. Statistical Computing
9. Mathematical Computing Using NumPy
10. Data Manipulation with Pandas
11. Data Visualization with Python
12. Introduction to Model Building



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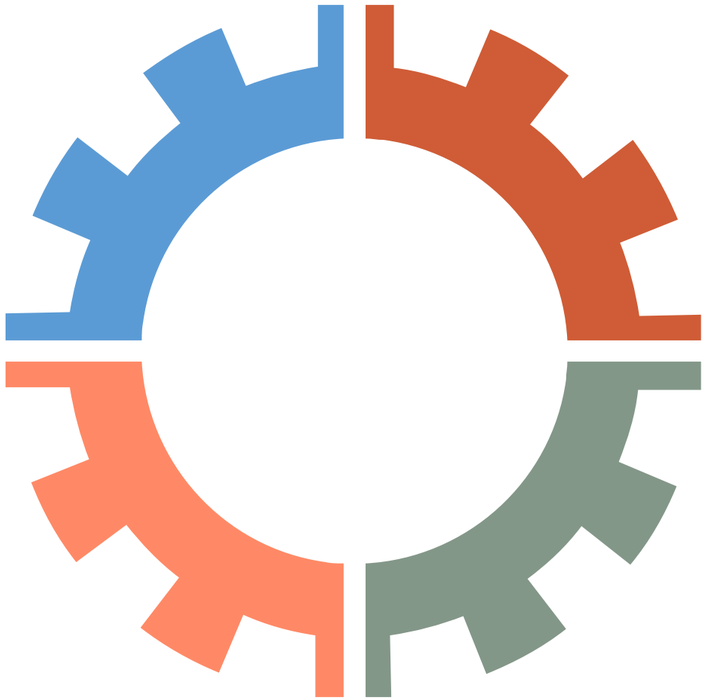
Topics Covered

Data Manipulation

Data Analysis



Data Visualization

Model Building

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Course Features

Assisted Practice and Unassisted Practice

Lesson-end Projects

Course-end Projects

Course-end Assessments

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Project Highlights

App Rating Prediction:
Make a model to predict the app rating with the information provided.

Bike-Sharing Demand Analysis:
Make a predictive model to predict the number of trips in a particular hour slot, depending on the environmental conditions.

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Learning Outcomes

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

- Use Python programming concepts
- Clean and prepare data for analysis using Python libraries
- Create visualizations for better business decision-making
- Infer the result of a hypothesis performed on sample data
- Build models using scikit-learn to predict future trends from data

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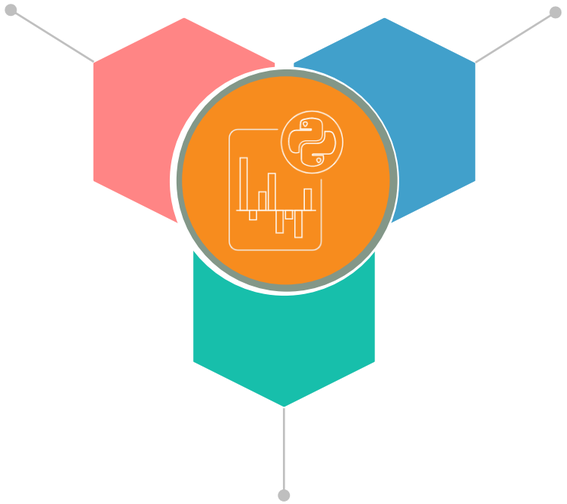
Course Completion Criteria

Attend all live virtual classes (LVC).



Score a minimum of 75% in the course-end assessment.

Submit at least one course-end project.

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DATA AND
ARTIFICIAL INTELLIGENCE

Happy Learning

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