30 Days Python Learning Plan with Daily Tasks (W3Schools-Based)

This 30-day learning plan follows the official W3Schools Python Tutorial (https://www.w3schools.com/python/default.asp). Each day includes a focused topic, a short study goal, and one practical or logical task to strengthen your understanding. The difficulty increases weekly to prepare you for real-world coding and small projects.

Day 1: Introduction to Python

Lesson: Read: 'Python Intro' and 'Get Started'. Learn what Python is and how to run it.
Task: Task: Print 'Hello, World!' and display your name using a variable.

Day 2: Python Syntax & Indentation

Lesson: Study: 'Syntax' and 'Statements'. Understand indentation and block structure.
Task: Task: Write a Python script that prints your favorite quote on two lines.

Day 3: Variables & Data Types

Lesson: Study: 'Variables' and 'Data Types'. Learn how to store data in variables.
Task: Task: Create variables for your name, age, and hobby. Print them in one sentence.

Day 4: Strings and String Methods

Lesson: Study: 'Strings' and 'String Methods'. Learn concatenation and slicing.
Task: Task: Ask for a user's full name, then print the name in uppercase and its length.

Day 5: Operators and Booleans

Lesson: Study: 'Operators' and 'Booleans'. Learn about arithmetic and logical operations.
Task: Task: Create a simple calculator that adds, subtracts, multiplies, and divides two numbers.

Day 6: Lists and Loops

Lesson: Study: 'Lists' and 'For Loops'. Learn to store multiple values and loop through them.
Task: Task: Make a list of 5 favorite foods and print each one with a loop.

Day 7: Tuples and Sets

Lesson: Study: 'Tuples' and 'Sets'. Learn differences between them.
Task: Task: Create a tuple of 3 favorite movies and a set of 3 favorite colors. Print both.

Day 8: Dictionaries

Lesson: Study: 'Dictionaries'. Learn key-value pairs and looping through them.
Task: Task: Create a dictionary for a student (name, course, age). Print keys and values separately.

Day 9: If-Else Conditions

Lesson: Study: 'If...Else'. Learn decision making.
Task: Task: Ask a user for age. If 18 or older, print 'Adult', else print 'Minor'.

Day 10: Review + Mini Challenge

Lesson: Review: All previous topics (Variables, Loops, Conditions).
Task: Task: Make a grade calculator that asks for 3 subject scores, computes average, and gives remarks.

Day 11: Functions

Lesson: Study: 'Functions' and 'Arguments'. Learn how to reuse code.
Task: Task: Create a function that takes a name and prints a greeting message.

Day 12: Lambda & Recursion

Lesson: Study: 'Lambda' and 'Recursion'.
Task: Task: Write a lambda function that doubles a number and a recursive function that computes factorial.

Day 13: Ranges & Arrays

Lesson: Study: 'range()' and 'Arrays'.
Task: Task: Print all even numbers from 1–20 using range().

Day 14: Classes & Objects

Lesson: Study: 'Classes and Objects'.
Task: Task: Create a class 'Student' with attributes (name, course) and a method to display details.

Day 15: Inheritance & Iterators

Lesson: Study: 'Inheritance' and 'Iterators'.
Task: Task: Create a subclass 'CollegeStudent' from 'Student' that adds a new attribute (year).

Day 16: Modules

Lesson: Study: 'Modules'. Learn to import built-in and custom modules.
Task: Task: Import math and random modules. Print a random number and the square root of 49.

Day 17: Dates, Math, and JSON

Lesson: Study: 'Dates', 'Math', 'JSON'.
Task: Task: Print today’s date and convert a Python dictionary to a JSON string.

Day 18: Regular Expressions

Lesson: Study: 'RegEx'.
Task: Task: Write a regex that checks if a user input contains only letters.

Day 19: File Handling

Lesson: Study: 'File Handling'.
Task: Task: Create a text file, write your 3 goals into it, then read and print the content.

Day 20: Error Handling

Lesson: Study: 'Try...Except'.
Task: Task: Ask the user for two numbers and divide them, handling division-by-zero errors.

Day 21: Working with Real Data

Lesson: Combine JSON + File Handling.
Task: Task: Save a list of students as JSON in a file, then read and display it.

Day 22: Mini Project Setup

Lesson: Plan your mini project (e.g., To-Do List or Contact Book).
Task: Task: Create a Python file and design menu options for your project.

Day 23: Project Development 1

Lesson: Start core functionality.
Task: Task: Implement functions for adding and viewing records.

Day 24: Project Development 2

Lesson: Add input validation and error handling.
Task: Task: Prevent duplicate entries and handle empty inputs.

Day 25: Project Development 3

Lesson: Add enhancements.
Task: Task: Add delete and update features to your project.

Day 26: Testing & Debugging

Lesson: Review and test all project functions.
Task: Task: Fix bugs and print test results for each function.

Day 27: Code Review & Refactoring

Lesson: Clean your code for readability.
Task: Task: Add comments, improve variable names, and organize functions logically.

Day 28: Documentation & Deployment

Lesson: Write documentation for your project.
Task: Task: Create a README file with instructions and screenshots.

Day 29: Final Review & Quiz

Lesson: Take the W3Schools Python Quiz.
Task: Task: Revisit your project and improve features based on your learning.

Day 30: Showcase & Next Steps

Lesson: Complete your project and plan next steps.
Task: Task: Present your final project to a friend or upload it to GitHub.

Tips: - Do all tasks in a real Python environment (IDLE, VS Code, or online editor). - Take notes on tricky topics. - Save your code daily to track progress. - After finishing, explore Django, Flask, or Pandas for next-level learning.