

Python with Excel

GoSkills online course syllabus

Saturday, February 15, 2025

Skill level

Beginner

Lessons

40

Accredited by

CPD

Pre-requisites

None

Video duration

3h 09m

Estimated study time

20h for all materials

Instructor

John Elder

Installation and Setup

- 1** **Introduction**
We'll spend a few minutes discussing what we'll learn throughout the course.
- 2** **Download and Install Python**
In this lesson, we'll download and install the Python programming language.
- 3** **Download and Install Sublime Text**
We're going to use the Sublime Text Editor to write our code in this course. So in this lesson, we'll download and install Sublime Text.
- 4** **Download and Install Git Bash**
To run the Python programs that we write, we need a terminal. We'll be using the git bash terminal in this course, so let's show how to download and install Git Bash.
- 5** **Virtual Environment**
To use Python properly, we create a virtual environment. In this lesson, we'll explain how to set one up.

Introduction To Python Programming

- 6** **Your First Python Program**
In this lesson, we'll create our first Python program, called hello.py.
- 7** **Python Variables and Print()**
In this lesson, we'll discuss how to store data within your program using variables and how to display them using the Print() command.

- 8 **Python Lists**
Python lists are used to keep track of a list of items. They can be text, numbers, variables, other lists and more.
- 9 **Python Tuples**
Tuples are just like lists, but they can't be changed once created. Let's discuss how to create and reference them.
- 10 **Python For Loops**
For loops are used to loop through things like lists or groups of data.
- 11 **Random Numbers**
In this lesson, we'll show how to generate random numbers.

Introduction to OpenPYXL

- 12 **Pip Install openpyxl and import**
openpyxl is the Python library that we'll use to connect our Python code to Excel.
- 13 **Creating Workbooks and Worksheets**
To work with workbooks and worksheets in excel, we need to import some things from openpyxl.
- 14 **Load Existing Excel File and Grab One Cell**
To load data from an existing Excel spreadsheet, we need to import load_workbook from openpyxl.
- 15 **Change Existing Cells - Method 2**
There's more than one way to change data in a spreadsheet cell. This method is handy to use when looping using For Loops.
- 16 **Using Excel Formulas**
Using Excel formulas in our Python code is easy!
- 17 **Existing Excel - Cell Range**
In this lesson, we'll discuss how to grab a whole range of cells.
- 18 **Existing Excel - Column and Column Range**
We can grab an entire column of data from an Excel spreadsheet.
- 19 **Existing Excel - Row Range**
Use this method when you want to grab an entire row - or a range of rows - from an Excel spreadsheet.

20 Existing Excel - Iterate Thru Rows
Let's discuss another method to iterate through rows in an Excel spreadsheet when you need a little more control.

21 Existing Excel - Iterate Thru Columns
Just like iterating through rows, we can also iterate through columns.

Hands on Exercise

22 Create Excel Spreadsheet Using Python and Random Numbers
Let's take what we've learned so far and put it to use with an exercise!

Formatting And Styling Spreadsheets With Python

23 Merge Cells and Unmerge Cells
In this lesson, we'll cover how to merge and unmerge cells.

24 Cell Font Properties
We can change the font color and sizing by using the font property.

25 Cell Alignment
In this lesson, we'll discuss methods to change the alignment of text in a cell.

26 Cell Fill (Pattern Fill)
Pattern Fill allows you to change the color and pattern of a cell.

27 Cell Fill (Gradient Fill)
We can easily change the gradient color of a cell in a spreadsheet.

28 Borders and Sides
In this lesson, we'll discuss how to change the border style and thickness of a spreadsheet cell.

Working With Charts And Graphs

29 Intro To Charts And Graphs - Pie Charts
In this lesson, we'll learn how to add Pie Charts to a spreadsheet.

- 30** Intro To Charts and Graphs - Bar Charts, Line Charts, Area Charts, ScatterCharts
There are many other basic charts you can use with openpyxl, such as bar charts, line charts, area charts, and scatter charts.
- 31** Bar Charts - Vertical, Horizontal, Stacked, and 3D
In this lesson, we'll look at Bar Charts - Vertical, Horizontal, Stacked, and 3D - in a little more detail.
- 32** Area Charts - 2D and 3D
In this lesson, we'll discuss how to add 2D and 3D Area Charts to your spreadsheet.
- 33** Radar Charts
Let's show how to add Radar Charts to your spreadsheet.
- 34** Doughnut Charts
In this lesson, we'll look at how to add Doughnut Charts.
- 35** Surface Charts
We'll discuss how to add Surface Charts to your spreadsheet.
- 36** Bubble Chart
Use these steps to add a Bubble Chart to your spreadsheet.
- 37** Projected Pie Charts
In this lesson, we'll look at Projected Pie charts, which are pie charts with some chunks pulled out and projected to the side.

Creating Excel Tables

- 38** Tables - Part 1
Tables are good for sorting data manually in your spreadsheet, and for drilling down and re-imagining your data.
- 39** Tables - Part 2
In this lesson, we'll build a Table.
- 40** Adding Images
We'll cover how to add images to your spreadsheet.