

# Python with Excel

GoSkills online course syllabus

Thursday, January 2, 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

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- 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

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- 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

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- 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

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**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

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**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

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**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

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- 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.