UNIVERSITY OF MICHIGAN

# COURSE CERTIFICATE

07/30/2020

## Maria Rojo Jose

has successfully completed

## Python Data Structures

an online non-credit course authorized by University of Michigan and offered through Coursera

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Coursera has confirmed the identity of this individual and their participation in the course.

WEEK

1

4 hours to complete

## Chapter Six: Strings

In this class, we pick up where we left off in the previous class, starting in Chapter 6 of the textbook and covering Strings and moving into data structures. The second week of this class is dedicated to getting Python installed if you want to actually run the applications on your desktop or laptop. If you choose not to install Python, you can just skip to the third week and get a head start.

7 videos (Total 57 min), 7 readings, 2 quizzes SEE ALL

WEEK

2

3 hours to complete

## Unit: Installing and Using Python

In this module you will set things up so you can write Python programs. We do not require installation of Python for this class. You can write and test Python programs in the browser using the "Python Code Playground" in this lesson. Please read the "Using Python in this Class" material for details.

WEEK

3

3 hours to complete

## Chapter Seven: Files

Up to now, we have been working with data that is read from the user or data in constants. But real programs process much larger amounts of data by reading and writing files on the secondary storage on your computer. In this chapter we start to write our first programs that read, scan, and process real data.

5 videos (Total 46 min), 1 reading, 3 quizzes SEE ALL

WEEK

4

3 hours to complete

## Chapter Eight: Lists

As we want to solve more complex problems in Python, we need more powerful variables. Up to now we have been using simple variables to store numbers or strings where we have a single value in a variable. Starting with lists we will store many values in a single variable using an indexing scheme to store, organize, and retrieve different values from within a single variable. We call these multi-valued variables "collections" or "data structures".

WEEK

5

3 hours to complete

## Chapter Nine: Dictionaries

The Python dictionary is one of its most powerful data structures. Instead of representing values in a linear list, dictionaries store data as key / value pairs. Using key / value pairs gives us a simple in-memory "database" in a single Python variable.

7 videos (Total 77 min) SEE ALL

WEEK

6

2 hours to complete

## Chapter Ten: Tuples

Tuples are our third and final basic Python data structure. Tuples are a simple version of lists. We often use tuples in conjunction with dictionaries to accomplish multi-step tasks like sorting or looping through all of the data in a dictionary.

WEEK

7

1 hour to complete

## Graduation

To celebrate your making it to the halfway point in our Python for Everybody Specialization, we welcome you to attend our online graduation ceremony. It is not very long, and it features a Commencement speaker and very short commencement speech.

2 videos (Total 16 min), 2 readings SEE ALL