UNIVERSITY OF MICHIGAN

COURSE CERTIFICATE

05/24/2020

Gloria Joseph

has successfully completed

Python Basics

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

Paul Resnick
Stephen Oney
Jaclyn Cohen

Verify at coursera.org/verify/9B745ZD2EHM8

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

Python Basics

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About this Course

This course introduces the basics of Python 3, including conditional execution and iteration as control structures, and strings and lists as data structures. You'll program an on-screen Turtle to draw pretty pictures. You'll also learn to draw reference diagrams as a way to reason about program executions, which will help to build up your debugging skills. The course has no prerequisites. It will cover Chapters 1-9 of the textbook "Fundamentals of Python

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Shareable Certificate
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100% online
Start instantly and learn at your own schedule.

Flexible deadlines
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Beginner Level

Syllabus - What you will learn from this course

WEEK

1

12 hours to complete

General Introduction

In week one you will be introduced to programming in python through lectures and the Runestone textbook - an interactive online textbook built for this course. By the end of the module, you will have run your first python program, and learned how to draw images by writing a program.

27 videos , 31 readings, 6 quizzes SEE ALL

WEEK

2

8 hours to complete

Sequences and Iteration

In week two you will use the lectures and the Runestone textbook to understand the basics of a few python data types - lists, strings, tuples - as well as a control structure - for loops. By the end of this week, you will be able to write more complex programs that create drawings by incorporating for loops. Finally, we will present the basics of an accumulation

pattern to you, which will be expanded on in each week for the rest of the course.

15 videos , 23 readings, 4 quizzes SEE ALL

WEEK 3

5 hours to complete

Booleans and Conditionals

In week three you will learn a new python data type - the boolean - as well as another control structure - conditional execution. Through the use of video lectures and the Runestone textbook, you will learn what Binary, Unary, Nested, and Chained Conditionals are, as well as how to incorporate conditionals within an accumulation pattern.

7 videos , 12 readings, 3 quizzes SEE ALL

WEEK 4

10 hours to complete

Sequence Mutation and Accumulation Patterns

In week four we will present deeper knowledge on using lists, strings, and python objects in general. We will also cover

7 videos , 12 readings, 3 quizzes SEE ALL

WEEK

4

10 hours to complete

Sequence Mutation and Accumulation Patterns

In week four we will present deeper knowledge on using lists, strings, and python objects in general. We will also cover how to use the accumulation pattern with lists and with strings. The final assignment will test your knowledge and skills through application, much like previous assessments and assignments did, though with a more difficult set of tasks now that you have learned the basics.

22 videos , 15 readings, 6 quizzes SEE ALL