

# Using Python to Access Web Data

Using Python to Access Web Data is the third course in the specialization Python for Everybody. It covers Chapters 11-13 of the textbook Python for Informatics. You should be familiar with the material covered in Chapters 1-10 before beginning this course,

Each Chapter will have a quiz and one or two required programming assignments. You must complete all of the quizzes and assignments to pass the course. To pass a quiz, you must get 80% correct. There is no partial credit on programming assignments. You can track your progress on the Assignments page.

The class is six weeks long, with suggested deadlines each week to help you stay on track. These weekly deadlines are not mandatory, and you can turn them off from the Course Settings options at the bottom of the Home page.

Students who want to earn a certificate will be asked to verify their identity each time they submit a quiz or assignment. If you do not plan to earn a certificate, you can also turn off these reminders from Course Settings. But if you want to get a certificate later, you should not turn these off.

You must complete all course requirements by the end of the last week to pass the course. If you have not completed the course, you can enroll in the next session and your work will be carried over. New sessions begin every month.

## Syllabus

### Unit 1

#### Introduction

- Welcome Video
- Textbook and Slides

#### Installing Python

- Installing Python on Windows 8
- Using Python on a Macintosh
- Using Python on a Raspberry Pi

- Installing Python on Windows Vista
- Peer-Graded Assignment: Python Installation Screen Shots

## **Unit 2**

### **Regular Expressions**

- Lecture Materials
- Quiz: Regular Expressions
- Assignment: Extracting Data With Regular Expressions
- Bonus Interview: Bjarne Stroustrup

## **Unit 3**

### **Networks and Sockets**

- Lecture Materials
- Quiz: Networks and Sockets
- Assignment: Understanding the Request / Response Cycle
- Bonus Interview: Leonard Kleinrock
- Bonus Interview: Robert Cailliau

## **Unit 4**

### **Programs that Surf the Web**

- Lecture Materials
- Quiz: Reading Web Data from Python
- Assignment: Scraping HTML Data with Beautiful Soup
- Assignment: Following Links in HTML with Beautiful Soup
- Bonus Interview: Tim Berners-Lee

## **Unit 5**

### **Web Services and XML**

- Lecture Materials

- Quiz: eXtensible Markup Language
- Assignment: Extracting Data from XML
- Bonus Interview: Ian Horrocks

## Unit 6

### JSON and the REST Architecture

- Lecture Materials
- Quiz: REST, JSON, and APIs
- Assignment: Extracting Data from JSON
- Assignment: Using the GeoJSON API

## A note about Specializations...

A Coursera Specialization is a series of courses that are designed to build on each other and culminate in a Capstone project. All courses except the Capstone are free, but to receive a Specialization certificate, you must pay for and earn a verified certificate in each of the courses. The Capstone is only open to students who have completed and received certificates in all of the other courses.

The University of Michigan offers the specializations [Python for Everybody](#) and [Web Design for Everybody](#). Python for Everybody is based on the free textbook [Python for Informatics](#), and includes the following courses:

- [Getting Started with Python](#) Chapters 1-5
- [Python Data Structures](#) – Chapters 6-10
- [Using Python to Access Web Data](#) – Chapters 11-13 (this course)
- [Using Databases with Python](#) – Chapters 14-15

Students with a **Verified Certificate** in the 10-week course Programming for Everybody (PR4E) can start at the third course if they want to complete the specialization.