Python Data Structures

Python Data Structures is the second course in the specialization Python for Everybody. It covers Chapters 6-10 of the textbook Python for Informatics, which is the same material as the second half of the course Programming for Everybody (Python).

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 8 out of 10 questions correct. There is no partial credit on programming assignments.

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 identify 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 will begin every six weeks.

Syllabus

Week 1

Chapter Six: Strings

- Welcome
- Textbook and Slides
- Lecture materials
- Review: Chapter 6 Quiz
- Assignment 6.5
- Bonus Interview: Monash Museum of Computing History
- Additional Materials

Week 2

Installing and Using Python

- Installing Python – Overview

- Using Python in this Class

- Python Code Playground

- Recommended: Install Python - Windows 8
- Recommended: Using Python - Macintosh
- Recommended: Using Python on a Raspberry Pi
- Recommended: Install Python - Windows Vista
- Optional Assignment: Python Installation and Screen Shots

Week 3

Chapter Seven: Files

- Lecture Materials
- Review: Chapter 7 Quiz
- Assignment 7.1
- Assignment 7.2
- Demonstration: Worked Exercise 7.6
- Bonus Interview: Gordon Bell

Week 4

Chapter Eight: Lists

- Lecture Materials
- Review: Chapter 8 Quiz
- Assignment 8.4
- Assignment 8.4
- Worked Exercise: Lists
- Bonus Interview: Rasmus Lerdorf

Week 5

Chapter Nine: Dictionaries

- Lecture Materials
- Review: Chapter 9 Quiz
- Assignment: 9.4
- Worked Exercise: Dictionaries
- Bonus Interview: Brendan Eich

Week 6

Chapter Ten: Tuples

- Lecture Materials
- Review: Chapter 10 Quiz
- Assignment: 10.2
- Worked Exercise: Tuples and Sorting
- Bonus Interview: Douglas Crockford

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[1] and Web Design for Everybody[2]. Python for Everybody is based on the free textbook Python for Informatics[3], and includes the following courses:

- Using Databases with Python[4] – Chapters 14-15

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

1. https://eventing.coursera.org/api/redirectStrict/Wbe-72rV23Lttz001H23LqZiFa-tjJtbAaqpp8Lrl_R8Zwnxf1VcOLXw0BpkXJjMeD5zCwKzt3BFqw-irlh0cA.Lq9fxecQXieRU-BESgNKcw.O7DFSUlZc5xm21raXMlHawMkgpt_-0qCFDnT0bj8HBbBrJ03qEH7OT8UULMCq2d4Sqc-d1GzMiS1hvFjVd0Dst8PZpB1Dm4ukH1EPj3_QqzsBFOgM7jNC8f6lvEzimPUUPSNXMfm22_Fq1cbTuQCPkGtYHDp1jxc3I0_NvP9Y-gSRj4ykLI7BAQYp8CFh4q4fNm6I92svincAfR1ypVpuLuSz19GG8TTy0kHw2geFtaeMiADpxrt2VlZe8tnc93UccrofYvk43iDYHiR6gz8hfV-RCVSj_7E1F97w5ZRi35duYXnAY0q1uEOTsL7pLeujASYsDpieUA74_phxiYv9Q
2. https://eventing.coursera.org/api/redirectStrict/o00oTPTVthmSlOhShrdTkqYSfE_aZYEUzNw_rCVx9JTWEXhJLHiIVCyCHE8yNGKmS0KQ97XzeQvSO73EQT2ChA.xROXXTnlqWr-W_JIAu7ckA.cgJlhMREYXammLihGYLZSsOsW_mZahVczSPKKzbxknYmBuPeZ5wFki8_nxEGmAioWRqxFHNl55L6zDNWRuhc1ukzhL7UrQMQDkg5QvD7EtzrQcQAnXXMQcozcTUvnWzViBVUJ0BVGhdoGjtVLzlolbkK4GLY-ByR40JAmVOBn7FOMz6na3g52sLux4ZYFRbhgQTqbs_WmxKE-O73VAIEKfpymK56yKClFLQDJsX-mjPQjzFecERMVbf-2Ahn89ScuFvkgPu9mmDrpXM8UG3LBDAQEeJ-Wlx3cSIiz4hTlrtZjGRbGGKpC66z6MzfEc71C62X6VnW5xWxvSy-zhPmDw
3. https://eventing.coursera.org/api/redirectStrict/uClh3bHEOXKS1lBURNF6RX37EUWNLbVnULYv7UMH5oTJY3nMQ9efYLLcrt0bH62fUSBnT0ZQjt4vAyg6zImLoQ.4Rs4gXA5jU73537in_m3NQ.yV9pwDqzKU6JnckbP-cC6CfqexupIBdLZhRPa_agzr204E-liuXopr5ry1BFRjrE5ZoAPTFLKhVrOQ4R0UM_JAjCreahFCb4sucYJP53_7U8MKycmuiUZBmeYDhA9I1z60TK6GoRf64T7STp_LafgunBjhJcZFfN8uLl4438JqnGyyDZbkj5d8PJri7EUgZSw8ySF6MZxGTXNfZGSA5Tnah9ZAfqEG5tKcMVVfajwFsbMVWNg26CXcTf8j5x5ssNK-l9L34tOU73kFyljbxRzXaNv2uSsLIhkECEFcBvSag
4. https://eventing.coursera.org/api/redirectStrict/8ZIUOoM_LQtR0XuVj_aWLiXpjXH_IyxPMV0-mJSRUEvNnBEzAA5xnE7qoILTv_umMNWR9tOWGARnvT2PC5H_mg.429ryH2RCZxv13c8Ksa8Tw.QYw1co09a1uQW2Cuyexrk_-9d0sV9tmq3n8fusWMy_tWoH8DBu5nVWoP2ohUVtILvXKR9RxYzwlcEM-jXwDnO0LiIdxaiIQaWC2oPM9qBCIrwQ2ldEIXTJf7uQSw3LR0CJ4LIDV2bugcXPBMNELYH-PqmsCBjYhr8iBpTf-nDWT1bje6ZENFyf4gX-KaOwqQzKZp8LNqxrB9MtsuY8pcXklaAMU8J1X7cVzyTmdSCA12RCbVZxUto0uetlOadG5pODeVFpD-QfxwQqs1fOTps4xYH7i6YNFaEfoAIGcMiDpCgrriSE4hYeZ4AMCyf7FMbTPu4vcBxzh4oa_9RmYQgQ