

Course

Progress

Dates

Discussion

You are taking "Final Exam" as a timed exam. [Show more](#)

End My Exam

00:52:08

Python Basics for Data Science

Pick up where you left off

Resume course

Welcome to Python Basics for Data Science!

We are glad you are taking this course! The team spent a lot of time developing this Python Basics for Data Science course so everyone can learn to program with this incredibly powerful language.

As you may know, Python has become one of the top languages used not only by developers, but also by data scientists, data engineers, and researchers alike. It lends itself well to creating applications and analyzing big data.

So we hope you enjoy this beginner's course in Python for Data Science.

Dismiss

Collapse all

✔ About this course

General Information

Learning Objectives

Syllabus

Grading Scheme

Change Log

🕒 Module 1 - Python Basics

Module Introduction and Learning Objectives

Video: Types (3:02)

Practice Quiz: Types

Video: Expressions and Variables (3:55)

Hands-On Lab: Your First Program, Types, Expressions, and Variables

For learners auditing the course

Practice Quiz: Expressions and Variables

Video: String Operations (3:58)

Hands-On Lab: String Operations

Practice Quiz: String Operations

Module 1 Cheatsheet: Python Basics

Module 1 Summary: Python Basics

Module 1 Glossary: Python Basics

Graded Quiz: Python Basics

Graded Quiz due 19 6ep. 2024 p., 02:05 GMT+2

🕒 Module 2 - Python Data Structures

Module Introduction and Learning Objectives

Video: Lists and Tuples (8:51)

Hands-On Lab: Lists

Hands-On Lab: Tuples

Reading: Cheat Sheet - Lists and Tuples

Practice Quiz: Lists and Tuples

Video: Dictionaries (2:25)

Hands-On Lab: Dictionaries

Practice Quiz: Dictionaries

Video: Sets (5:17)

Hands-On Lab: Sets

Reading: CheatSheet - Dictionaries & Sets

Practice Quiz: Sets

Discussion Prompt: Python Data Structures

Module 2 Summary: Python Data Structures

Reading: Glossary - Python Data Structures

Graded Quiz: Python Data Structures

Graded Quiz due 21 6ep. 2024 p., 15:10 GMT+2

🕒 Module 3 - Python Programming Fundamentals

Module Introduction and Learning Objectives

Video: Conditions and Branching (10:17)

Hands-on Lab: Conditions and Branching

Practice Quiz: Conditions and Branching

Video: Loops (6:45)

Reading: Loops

Hands-on Lab: Loops

Practice Quiz: Loops

Video: Functions (13:31)

Hands-on Lab: Functions

Practice Quiz: Functions

Video: Exception Handling (3:49)

Reading: Exception Handling

Hands-On Lab: Exception Handling

Practice Quiz: Exception Handling

Video: Objects and Classes (10:52)

Reading: Objects and Classes

Hands-on Lab: Objects and Classes

Discussion Prompt: Classes in Python

Practice Quiz: Objects and Classes

Reading: Cheatsheet - Python Programming Fundamentals

Practice Lab: Text Analysis

Module 3 Summary: Python Programming Fundamentals

Reading: Glossary - Python Programming Fundamentals

Graded Quiz: Python Programming Fundamentals

Graded Quiz due 24 6ep. 2024 p., 04:16 GMT+2

🕒 Module 4 - Working with Data in Python

Module Introduction and Learning Objectives

Video: Reading Files with Open (3:43)

Hands-On Lab: Reading Files with Open

Video: Writing Files with Open (2:54)

Hands-On Lab: Writing Files with Open

Practice Quiz: Reading & Writing Files with Open

Video: Pandas: Loading Data

Video: Pandas: Working with and Saving Data (2:06)

Practice Lab: Selecting data in a Dataframe

Obtain an IBM Cloud Feature Code

Hands on Lab: Pandas

Practice Quiz: Pandas

Video: One Dimensional NumPy (11:23)

Hands-On Lab: One Dimensional Numpy

Video: Two Dimensional NumPy (7:13)

Hands-On Lab: Two Dimensional Numpy

Reading: Cheatsheet - Working with Data in Python

Reading: Some Context on APIs

Module 4 Summary: Working with Data in Python

Practice Quiz: Numpy in Python

Reading: Glossary - Working with Data in Python

Graded Quiz: Working with Data in Python

Graded Quiz due 26 6ep. 2024 p., 17:21 GMT+2

🕒 Module 5 - APIs and Data Collection

Module Introduction and Learning Objectives

Video: Application Program Interface (5:12)

Hands-On Lab: Introduction to API

Practice Quiz: Simple APIs

Video: REST APIs & HTTP Requests - Part 1 (4:11)

Video: REST APIs & HTTP Requests - Part 2 (4:56)

Hands-on Lab: Access REST APIs & Request HTTP

Hands-On Lab: API Examples

(Optional) Video: HTML for Webscraping (5:00)

(Optional) Video: Webscraping (4:59)

Hands-on Lab: Web Scraping

Video: Working with different file formats (csv, xml, json, xlsx) (4:11)

Hands-on Lab: Working with different file formats

Cheat Sheet: APIs and Data Collection

Practice Quiz: REST APIs, Webscraping, and Working with Files

Practice Project: GDP Data Extraction and Processing

Module 5 Summary: APIs, and Data Collection

Discussion Prompt: JSON and HTTP

Module 5 Glossary: APIs, and Data Collection

Graded Quiz: APIs, and Data Collection

Graded Quiz due 29 6ep. 2024 p., 06:26 GMT+2

🕒 Final Exam

Instructions

Final Exam

Іспити з обмеженням по часу due 31 бер. 2024 p., 20:32 GMT+3

✔ Python Cheat Sheet

Python Cheat Sheet: The Basics

✔ Course Rating

Course Rating

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✔ Course Wrap Up

Congratulations and Next Steps

Credits and Acknowledgments

Set a weekly learning goal

Setting a goal motivates you to finish the course. You can always change it later.

Casual

1 day a week

Regular

3 days a week

Intense

5 days a week

Set a goal reminder

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Important dates

📅 **ср, 13 6ep. 2024 p.**

Course starts

📅 **вт, 19 6ep. 2024 p.**

Graded Quiz: Python Basics

📅 **чт, 11 квіт. 2024 p.**

Audit Access Expires

You lose all access to this course, including your progress.

📅 **чт, 20 черв. 2024 p.**

Verification Upgrade Deadline

You are still eligible to upgrade to a Verified Certificate! Pursue it to highlight the knowledge and skills you gain in this course.

[Upgrade to Verified Certificate](#)

📅 **нд, 30 черв. 2024 p.**

Course ends

After the course ends, the course content will be archived and no longer active.

View all course dates

Course Handouts

Python Cheat Sheet: The Basics

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