**PY 101: Crash Course Live - O-O Python Programming Fundamentals**

**About this Course**

Welcome to Crash Course Live: Object-Oriented Python Programming Fundamentals.

In this course we will learn about the fundamentals of programming and the Python language by building simulations and games together. This course is for beginners, no coding experience needed.

The idea of this course is to build a strong foundation in the skill of programming that will allow us to traverse the spectrum of what we can use programming for. Whether you want to use programming to build software, develop websites, manage networks, or perform big-data analytics, they all start with having a solid understanding and honed skills in programming fundamentals. Further, the skills we will learn in this class can be applied to most of the modern programming languages.

The goal is to gain hands-on experience with programming so that we can apply that knowledge to our own projects. And most importantly we will have a lot of fun in the process!

**What you we will learn**

*Section 1: Getting Started With Python*

--What is Python and how it is used.

--Basic Variables: Strings, Bools, Ints, Floats.

--Conditionals: if and elif

--Introduce Functions: How to use functions

--Mini-Project: Rock-Paper-Scissors Game

*Section 2: Continue with Functions, Advanced Variables, Loops*

--More Functions: Practice problems

--Advanced Variables: Lists, Dictionaries, and their properties.

--Introduce Loops: For Loops, While Loops

--Mini-Project: Guess that Number Game

*Section 3: More Loops and Advanced Concepts, Shell Processing*

--More Loops: Practice problems

--Shell Processing, Tuples, other concepts

--Introduce Object Oriented programming

--Project: Hangman Game

*Section 4: Class Objects*

--Learn Class Objects

--Putting together all the concepts we learned.

--Mini-Project: Deck Simulator / Kings Game

*Section 5: Classes Continued*

-- Go over Deck Simulator and Kings

-- More Classes,

--Blackjack Game

--Mini-Project: AddLib Karaoke

**Prerequisites and Requirements**

While no prior programming experience needed. Feel free to bring your own computer.

**How to Take This Course**

There are several ways to signup for this course. This course is primarily offered on Object-Oriented.org, but any of the following links would work.

--Object-Oriented.org

--Eventbrite.com

--Meetup.com

**About the instructor**

Cy is a software engineer and one of the co-founders of Object-Oriented.org and organizer for Tech DC and NOVA iOS.

He’s worked as a data research consultant for Government Executive and the National Journal Group. He frequently speaks on technology and programming at conventions across the country. Currently, he is building an tech / entrepreneurial community in DC. The goal is to bring together bring together an elite group of socially responsible entrepreneurs, developers, and young professionals.

Cy is passionate about using data analytics and building data driven products to help government and business leaders meet their challenges. Visit his website at www.cynonymous.com to learn more.