Python II: Applied Python

This 4 day course picks up where Python I leaves off, covering some topics in more detail, and adding many new ones, with a focus on enterprise development. This is a hands-on programming class. All concepts are reinforced by informal practice during the lecture followed by lab exercises. Many labs build on earlier labs, which help students retain the earlier material.

Course Objectives:

- Leverage OS Services
- Code graphical interfaces for applications
- Create modules
- Create and run unit tests
- Define classes
- Interact with network services
- Query databases
- Process XML data

Audience: Advanced users, system administrators and web site administrators who want to use Python to support their server installations, as well as anyone else who wants to automate or simplify common tasks with the use of Python scripts.

Prerequisites: All students should be able to write simple Python scripts, using basic data types, program structures, and the standard Python library.

Number of Days: 4 days

1 Python Refresher

Variables
Python Data Types
Sequences
Mapping types
Program Structure
Files and console I/O
Conditionals
Loops
Defining a Function
Function Parameters
Built-ins

2 OS Services

The **os** module
Environment Variables
Launching External Programs
Paths, directories, and filenames
Walking Directory Trees
Dates and Times
The Time Module
The Calendar Module

3 Pythonic Programming

Common Python Idioms
Slicing and Dicing
Unpacking Function Arguments
Lambda Functions
Nested Functions
List Comprehensions
Iterables
Generator Expressions
Writing Generators
Python Time Travel
Three Python Easter Eggs
A String Trick
String Formatting

4 Modules and Packages

Modules
Using **import**