

This three-day course provides the student with the knowledge to create and run Python scripts that include Python-specific data structures, function, modules, and classes.

**Audience:** Programmers who are new to the Python language.

**Prerequisites:** Basic computer knowledge and keyboarding skills.

**Number of Days:** 3 days

- 
- |   |   |
|---|---|
| <p><b>1. Meet Python</b><br/>Origin of Python<br/>Where to Get Python<br/>Invoking Python<br/>Other Python Implementation<br/>Python Resources</p> <p><b>2. Handling Numbers and Strings</b><br/>Numeric Data<br/>Using Numbers<br/>String Data<br/>Using Strings</p> <p><b>3. Variables and Data Structures</b><br/>Variables<br/>Numeric and String Variables<br/>Lists<br/>Tuples<br/>Sets<br/>Dictionaries<br/>Additional Resources</p> <p><b>4. Flow Control</b><br/>Controlling the Flow<br/>The 'if' Statement<br/>The 'while' Statement<br/>The 'for' Statement<br/>The range() Function and Loops<br/>Other Statements with Loops</p> <p><b>5. Conditional Expressions</b><br/>Conditions and Conditional Expressions<br/>Numeric Comparisons and Conditions<br/>Comparing Strings<br/>Complex Conditions</p> <p><b>6. Basic Input and Output</b><br/>Reading Input<br/>Simple Output<br/>Formatted Output</p> | <p><b>7. Function</b><br/>Creating Functions<br/>Invoking Functions<br/>Returning Values from Functions<br/>Passing Parameters<br/>More About Function Arguments<br/>Scope of Variables<br/>Lambda Functions</p> <p><b>8. Using Modules</b><br/>What are Modules?<br/>Creating Modules<br/>Using Modules<br/>More About Modules<br/>Compiled Modules<br/>Standard Modules</p> <p><b>9. An Introduction to Classes</b><br/>Namespaces<br/>What is a Class?<br/>Defining a Class<br/>Defining Class and Instance Attributes<br/>Defining Methods<br/>Instantiating a Class<br/>Inheritance<br/>Resources</p> <p><b>10. Regular Expressions</b><br/>Pattern Matching vs. Wildcards<br/>Compiling Regular Expressions<br/>Matching vs. Searching<br/>Substitution<br/>Regular Expressions: Metacharacters<br/>The Problem with \<br/>Special Backslash Sequences<br/>Using MatchObject<br/>Additional Regular Expression<br/>Operation<br/>Additional Resources</p> |
|---|---|

**11. Files**

File Handles and File-like Objects

Opening and Closing Files

Reading from Files

Writing to Files

Moving Around in Files

The pickle Module

Resources

**12. Errors and Exceptions**

Errors, Exceptions, and Warnings

Raising an Exception

User Defined Exceptions

Catching and Handling Exceptions

The raise Statement