

B Robert Carmel
Course: Introduction to Python Programming
Introduction and Course Outline

```
File Edit Format Run Options Window Help
from itertools import chain as _chain
from itertools import repeat as _repeat
from itertools import starmap as _starmap
from keyword import iskeyword as _iskeyword
from operator import eq as _eq
from operator import itemgetter as _itemgetter
from reprlib import recursive_repr as _recursive_repr
from _weakref import proxy as _proxy

try:
    from _collections import deque
except ImportError:
    pass
else:
    _collections_abc.MutableSequence.register(deque)

try:
    from _collections import _deque_iterator
except ImportError:
    pass

try:
    from _collections import defaultdict
except ImportError:
    pass

#####
### OrderedDict
#####

class _OrderedDictKeysView(_collections_abc.KeysView):
    def __reversed__(self):
        yield from reversed(self._mapping)

class _OrderedDictItemsView(_collections_abc.ItemsView):
    def __reversed__(self):
```

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Introduction

The Introduction to Python Programming course is a beginning programming course that includes 15 lessons. The course is designed for students with little or no programming experience.

The cost of this 10-lesson course is \$1,295. Students may be eligible for a 20% discount.

This course is a hands-on programming course. Students will learn the key topics of beginning Python programming and will also practice coding Python during the lessons. Students who complete the course will have the knowledge and programming experience to learn more advanced Python topics and be hired as a junior Python programmer.

I will be working closely with students during the entire course to ensure that they understand the material and complete the lesson's hands-on training.

Note: Students should have a Windows 64bit computer with a minimum of 8GB memory.

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This course's lessons will include:

- Setting up the Python development environment.
- Learning and coding strings and number variables in Python.
- Python conditional logic, functions and loops.
- Coding and debugging Python programs.
- Python dictionaries and tuples.
- Object oriented programming in Python.
- Reading and writing external files in Python.
- Using PIP to install Python packages.

About Instructor B Robert Carmel

I have more than 25 years of experience working in Information Technology as a senior software and data engineer, solutions architect and technical trainer. I worked for several multi-national Fortune 500 companies in the USA:

Company	Industry	Position(s)
Texaco Inc.	Oil & Gas	Programmer Analyst
Lockheed Inc	Aerospace	Senior Analyst
Price Waterhouse Coopers	Management Consulting	Senior Information Systems Consultant
Roche Inc.	Pharmaceuticals	Senior Systems Consultant
Boulder County Mental Health Dept.	Government	Lead Programmer, Technical Trainer
Century Link Inc	Telecommunications	Lead Programmer Analyst
Wipro Inc	IT Consulting	Senior Solutions Architect, Technical Trainer

I am an excellent teacher and mentor. I have the patience and dedication to support new students who take on difficult challenges.

Lesson 1: Installing Python. Coding the First Python Program

In Lesson 1, students will download and install Python on their Windows computer. They will program their first Python program using the Python Integrated Development and Learning Environment (IDLE).

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Lesson 2: Strings and String Methods

In Lesson 2, students will learn and practice coding the various string variables and methods that are commonly used in Python.

Lesson 3: Numbers and Math

Lesson 3 introduces the Python number variables and their mathematical representations. Students will practice coding these key variables.

Lesson 4: Functions and Loops

In Lesson 5, students will create Python functions that may be used throughout their programs. They will also learn about Python loops for controlling program execution.

Lesson 5: Python Scopes

Python has some unique scoping rules for variables and students will learn about the local, enclosing and global scopes.

Lessons 6 & 7: Conditional Logic and Control Flow

In Lessons 6 & 7, students will learn and code conditional logic and control statements in Python.

Lesson 8: Finding & Fixing Bugs. Python Tuples

Debugging programs is a critical skill that students will learn about in Lesson 8. Students will also learn and code Python tuples for organizing variables.

Lesson 9: Python Dictionaries. Object Oriented Programming (overview)

In Lesson 9, students will learn about and code Python dictionaries and be introduced to Object Oriented Programming concepts.

Lesson 10: Building System with Classes. Python Modules and Classes

Students will code Python modules and classes to create object-oriented Python programs.

Lessons 11 & 12: File System Operations

In these lessons, students will learn and code the Python functions for file iterations, searching, deleting, etc.

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Lesson 13: Reading and Writing Files

In Lesson 13, students will learn how read and write data to external sources.

Lesson 14: Installing Packages with PIP

Students will learn how to install the many Pythons and the 3rd party packages using PIP.

Lesson 15: Reviewing the Course

In the final lesson, students will review the course materials and cover and questions or issues for final clarification.