Introduction to Python Programming - Syllabus

Course Information

Introduction to Python Programming course is intended for students with little or no programming experience. It aims to provide students with an understanding of the role computation can play in solving problems and, regardless of their major, feel justifiably confident of their ability to write small programs that allow them to accomplish useful goals.

Coursebook & Resources

- *Fundamentals of Python Programming, Richard L. Halterman*

  Updated content of the book is maintained under the URL:
  http://python.cs.southern.edu/pythonbook/pythonbook.pdf

- The official Python Tutorial.
  http://docs.python.org/tut/

- How to think like a computer scientist (interactive)
  http://interactivepython.org/runestone/static/thinkcspy/index.html

- How to think like a computer scientist
  http://openbookproject.net/thinkcs/python/english3e/

- Code Academy Python
  http://www.codecademy.com/tracks/python

- A useful hands-on book:
  http://anh.cs.luc.edu/python/hands-on/3.1/Hands-onPythonTutorial.pdf

Instructor

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- Office Hours: TBD

Syllabus

No	**Subject**
1	The Context of Software Development - Software - Learning Programming with Python
2	Values and Variables - Integer and String Values - Identifiers - User Input - String Formatting
3	Expressions and Arithmetic - Expressions - Arithmetic Examples
4	Conditional Statements - Boolean expressions - If/Else statement - Other Conditional Expressions
5	Iteration - Loops
6	Using Functions - Introduction to Using Functions - Functions and Modules
7	**Midterm Week**

8	Writing Functions -1 - Function Basics - Parameter Passing - Custom Functions vs Standart Functions - Refactoring
9	Writing Functions -2 - Global Variables - Making Functions Reusable - Functions as Data
10	Objects - Using Objects - String, File Objects
11	Lists - Using Lists - Building Lists - List Traversal
12	Tuples, Dictionaries, and Sets - Storing Aggregate Data - Enumerating the Elements of a Data Structure
13	Class Design - Composition and Inheritance
14	Review