Midterm Exam Study Guide

General Guidelines

The exam is taken from [**Inroduction to Programming Using Python 3**](http://en.wikibooks.org/wiki/Non-Programmer%27s_Tutorial_for_Python_3.0) , Python worksheets, and MyProgramming Lab. The text, worksheets, quizzes, and programming assignments should be the primary instruments of study to prepare for the exam. The PowerPoint slides in CougarView should be regarded as a companion to rather than substitute for the text. **The learning aids in each chapter and the resources on the author’s website are also useful in preparing for the exam.**

Material from Python programming assignments and labs

**Test Format** (October 10, 2014 in CCT405)
Multiple Choice Questions (20 pts)
Short Answer Questions (40 points) - evaluate, compute, and write Python statements, what is the output from Python code segments?
Python Programming Problems (40 pts)

**ACADEMIC OBJECTIVES**

* The students will demonstrate an understanding of computing and computer science.
* The students will demonstrate knowledge of computer programming concepts.
* The students will demonstrate knowledge of basic syntax of a specific programming language
* The students will demonstrate the ability to read moderately complex programs written in a specific programming language and understand what these programs do
* The students will demonstrate the ability to design algorithms utilizing the principles of object-oriented programming to solve moderately complex problems
* The students will demonstrate the ability to write moderately complex programs in a specific programming language to implement these algorithms

Specific Guidelines Things you should know:

**Computational Thinking**

* What it is and how to use it.

**Introduction to Computers**

* What is a computer?
* Bits & Bytes
* Programming Languages

**PYTHON**

    identify the parts of a simple Python program (sections 1.6-1.8)

    Python terminology, expressions (sections 2.1-2.3)

    Python input, variables, and assignment statements (Section 2.4-2.14)

    Python math functions (Sections 3.1-3.3)

    Python strings (Sections 3.3-3.6)

    Turtle Graphics (Sections 1.9, 3.7-3.8, 4.16)

    Python Boolean expressions (Section 4.1-4.3)

    Python decision statements (if, if-else, elif) (Sections 4.4-4.14)

    Python while loops (Section 5.1-5.2)

    Python for loops (Sections 5.3-5.6)

    Debugging Python programs