

Midterm Exam Study Guide

General Guidelines

The exam is taken from [Introduction to Programming Using Python 3](#), 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