

CSCI 135 – Fundamentals of Computer Science I

Exam I Study Outline

I. Python Basics

- A. How Python is compiled and run
- B. Python program parts
- C. Sequential Execution
- D. Idle Shell and Editor
- E. Command Window
 - 1. Changing directories
 - 2. Running Python programs

II. Variables and Data Types

- A. Variables
 - 1. Declaration
 - 2. Assignment
- B. Basic data types
- C. Type Conversion
- D. Operations on different data types
 - 1. String Manipulation
 - 2. Math Expressions
 - 3. Boolean Expressions

III. Lists

- A. Declaration
- B. Creation
- C. Initializing list elements
- D. Accessing list elements
- D. Modifying list elements
- E. Operations on Lists
 - 1. Slicing
 - 2. Copying
 - 3. List Comprehensions
- F. Multidimensional lists

IV. Conditionals

- A. If
- B. Format/syntax
- C. How to use them
- D. Enumerations

V. Loops / Iteration

- A. while
- B. for
- C. Format/syntax
- D. How to use them

VI. Input/Output

A. Screen Output

1. print
2. Formatted printing

B. Input

1. Interactive input
2. Command line input
3. Text file input

C. Graphics and Audio

1. StdDraw
 - a. Shapes
 - b. Color
 - c. Adjusting default window
 - d. Displaying images
 - e. Animation
2. StdAudio
 - a. Playing sound files