

CSSE1001/7030

Semester 2, 2021

Course notes and tutorials for CSSE1001 and CSSE7030.

The combined one-page course notes (useful for printing) are available [here](#).

Week-by-Week

Week	Topics	Readings	Tutorial	MyPyTutor
1	Introduction to SWE Variables & Types	Introduction to Software Engineering and Programming Arithmetic. Basic Types and Variables Python Programming Introduction to Software Design and		Log into MyPyTutor
2	Control Structure Functional Decomposition	Implementation Loop Invariants Functional Decomposition Commenting	Expressions and Control Structures	Intro to Programming
3	Data Structures Lists	Data Structures Mutable Objects Dictionary	Functional Decomposition	Control Structures
4	Dictionaries File Processing	Example - Histogram Files Sudoku Example	Data Structures	Functions
5	Exceptions Object Oriented Programming	Exception Handling	Debugging and Dictionaries	List, Strings, Tuples
6	Variable Scope Testing	Variable Scope	File IO and processing	Dictionaries, Lists, and Strings
7	Class Design Inheritance & Polymorphism	Class Design Inheritance	Class Design	Classes, Objects, and Exception Handling
8	Class Design GUI: Basic Widgets	Graphical User Interfaces - Part 1	Inheritance	Inheritance
	GUI: Animation, Text Widgets,			

9	Canvas Widgets GUI: File Menus, File Dialog, and Drawing	Graphical User Interfaces - Part 2	GUI 1	GUI programming 1
Break				
10	GUI: Multiple Class GUIs GUIs: Model View Controller		GUI 2	GUI programming 2
11	Recursion Functional Programming: Lambda, List Comprehension,	Recursion	Recursion	Recursion
12	Iterators Functional Programming: Operators	Functional Programming	Functional Programming	Functional Programming
13	Complexity Revision	Complexity Computability	Complexity	Revision