

The final is comprehensive, but will focus a bit more heavily on material post-Exam 2. Learning objectives from those chapters are discussed below.

Chapter 10: Students should be able to:

- O1: Create a new simple class from scratch with an appropriate constructor that defines new attributes for the class.
- O2: Write getter and setter methods to retrieve or manipulate class attributes.
- O3: Define a dunder method so that instances of the class are printed nicely to the screen.
- O4: Create objects which are instances of a custom defined class.
- O5: Use receiver syntax to call class methods on an instance.

Chapter 11: Students should be able to:

- O6: Add, remove, and change key/value pairs in an existing dictionary.
- O7: Access or lookup values corresponding to different keys in a dictionary.
- O8: Iterate through a dictionary.
- O9: Create a Python set object with a non-zero number of valid elements.
- O10: Utilize built-in methods for set objects to compare or check membership.

Chapter 12: Students should be able to:

- O11: Choose appropriate data structures for a given type of information
- O12: Comfortably nest data structures within others to model and store more complicated data
- O13: Retrieve or select specific information from within a nested data structure
- O14: Read and write JSON data from/to an external file into native Python data types