

# Materials

Here you will find a listing of lesson materials for the course such as slides, assignments, and similar.

## 1. Welcome Weeks

- **Activity 01:** [README.md](#) Due Date: Wednesday 3 Sept 2025 (by the end of class)
- [GitHub Classroom Link](#) (Used to setup your workspace and repository for your assignment submission.)

## 2. Getting Started

- Installing necessary software for the course. [Python](#), [Visual Studio Code](#) and [GitHub](#).
- [Required Reading: Gutttag Chapter 1](#)
- **Lab 01:** Working with the UV package manager to run Python code.
  - [GitHub Classroom Link](#)
  - [README Lab 01 documentation](#)

## 3. Crash Course I: Python

- [Required Reading: Gutttag Chapter 2](#)
- **Literals, Variables, Conditionals, Strings, etc.**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.
- **Lab 02:** Refactoring (Restructuring) a *Rock, Paper, Scissors* Python game.
  - [GitHub Classroom Link](#)
  - [README Lab 02 documentation](#)
- **Activity 02:** Building a morse code translator in Python and UV
  - [GitHub Classroom Link](#)

## 4. Crash Course II: Python

- **Literals, Variables, Conditionals, Strings, etc.**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.
- **Activity 03:** Coding using literals, lists and conditionals
  - [GitHub Classroom Link](#)
- **Lab 03:** Completing smaller Python programs.
  - [GitHub Classroom Link](#)
- **Guest Speaker:** [Form](#)

## 5. Chapter 2: Lists and Dictionaries

- **Return to Programming Challenges of Activity 03**
  - [README](#)
  - Note: *This time only: Changed Due Date. Now set to 22nd Sept 2025, 11:30pm*
- **Lists and Dictionaries at Work**
  - **PlayGround demonstrations:** [Demonstration](#)
  - **Finish slides from last week** (Check the challenges)
    - \* [HTML](#) Slides
- **Lab04:** For loops and While Loops
  - [GitHub Classroom link](#)
- **Activity 04:** Fixing code for finding approximations
  - [GitHub Classroom Link](#)

## 6. Chapter 3: Exhaustive Enumeration and Approximation

- **Some Approximation Techniques in Python**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.
- **A Study of the General nth Root Algorithm**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.

- **Lab05:** Approximations by the Taylor Series
  - [GitHub Classroom link](#)

## **7. Chapter 5: STRUCTURED TYPES AND MUTABILITY**

- **Some Fundamental Programming in Python**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.
- **Midterm Preparation Guide**
  - Midterm exam: During lab on Thursday, 23rd October 2025
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.

## **8. Chapter 4: A Return to Functional Programming**

- **Lambda and Higher Order Functions**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.
- **Classes and Decorators Functions**
  - [HTML](#) Slides
  - [PDF](#) The slide's material as a pdf.