

Tentative Course Schedule

Stretch

Briefly describe the specific topics you will cover each day and what activities you will do. For the last day of class, we'd like you to plan a final project that can be showed case to other courses in your field and to families.

Key:

Xuetao teaching = yellow highlight

Bella teaching = green highlight

Date	Topic(s)	In-class Activities
Monday, July 1	Introduction to Python & Setting Up	Install Python, write and run the first "Hello World" program, basic IDE introduction.
Tuesday, July 2	Variables, Data Types, and Basic Operations	Practice exercises with different data types and operators, simple calculation programs.
Wednesday, July 3	Control Structures: Conditional Statements <i>Kevin Lin guest lecture (confirmed) – 1pm-1:30pm</i>	Implementing simple decision-making programs using if-else structures, interactive quizzes. Writing loops to solve problems, creating simple games like guess-the-number.
Tuesday, July 8	Functions and Modules <i>Kevin Jamieson guest lecture (confirmed) – 10:30am-11am</i>	Building custom functions, exploring Python standard libraries, simple projects using functions.
Monday, July 9	Recursion	Practice the basics of iteration and recursion (base case and recursive cases). Continue learning how to operate for loops and while loops with more complex problem settings, like outputting through a range.
Wednesday, July 10	Data Structures: Lists and Tuples	Manipulating lists and tuples, creating a list-based project like a shopping list program.
Thursday, July 11	Data Structures: Sets and Dictionaries <i>David Kohlbrenner guest lecture (confirmed) – 11am-11:30am</i>	Exercises with sets and dictionaries, building a simple dictionary-based app.
Monday, July 15	String Manipulation and Text Processing	String operations, creating a text-based game or a simple text analysis tool.
Tuesday, July 16	File I/O	Reading from and writing to files, creating a file-based data logging application.

Wednesday, July 17	Error Handling and Exceptions + Intro to OOP Natasha Jaques guest lecture (confirmed) – 11am-11:30am	Implementing try-except blocks, improving previous projects with error handling. OOP basics and examples.
Thursday, July 18	OOP (continued, examples) + Introduction to Projects I	OOP (continued) with examples. Example of projects. Operations.
Monday, July 22	Introduction to Projects II Lauren Bricker guest lecture (confirmed) – 10:30am-11am	Team forming, project distributing, operating. Work session.
Tuesday, July 23	Project Development Day Steve Tanimoto guest lecture (confirmed) – 10:30am-11am	Students start developing their final projects, with guidance and troubleshooting from the instructor.
Wednesday, July 24	Project Writing	Students continue to work on the projects.
Thursday, July 25	Final Project Presentation	Students finalize their projects, practice, and then present them to the class, other courses, and families.