

Programming Concepts & Methodologies I

COMSC122

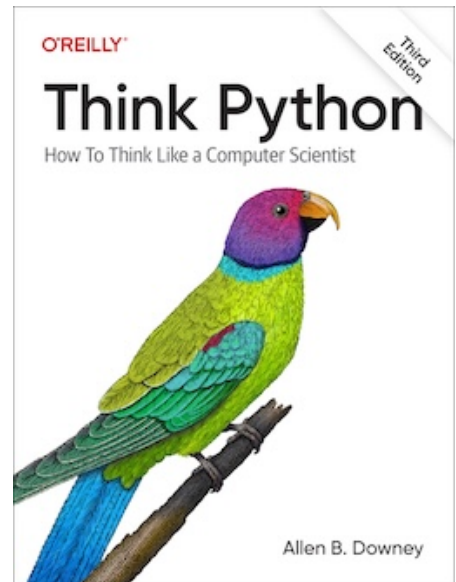
Fall 2025 Sam Bowne

Online

3 credits

Class Description

This course introduces the discipline of computer science with practical hands-on problem solving using a 'high-level' computer programming language. The course will include basic syntax and semantics of a 'high-level' language, variables, types, expressions, assignment, basic computation, simple I/O, conditional and iterative control structures, functions and parameter passing, structured decomposition, program design, programming style, algorithms and problem solving strategies, overview of programming languages, binding, visibility, scoping, and lifetime management.



Student Learning Outcomes

1. Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions. (PSLO 1, 2)
2. Use pseudocode or a programming language to implement, test, and debug algorithms for solving simple problems. (PSLO 1, 2)
3. Summarize the evolution of programming languages illustrating how this history has led to the paradigms available today. (PSLO 1)
4. Demonstrate different forms of binding, visibility, scoping, and lifetime management. (PSLO 1, 2)

Mode of Delivery

There are optional online class meetings delivered via Twitch. There will be Youtube videos of the class meetings available also.

Instructor Information

You can reach me by sending messages via Canvas, as explained on my website samsclass.info. You can also reach me at this URL every evening at 7:30 pm Mon-Thu: <https://twitch.tv/sambowne>

Prerequisites

Advisory: ENGLC1000 - Academic Reading and Writing

Textbook

Think Python (free online at <https://alldowney.github.io/ThinkPython/>)

Course Management System

All class materials are at samsclass.info including information about hands-on projects and quizzes. We will use a Canvas server, as explained on that site, for all examinations

Grading

Your grade is determined from hands-on projects and quizzes. Attendance is not graded. The system is:

A	90% or more
B	80 - 90%
C	60 - 80%
D	50 - 60^
F	less than 50%