

Introduction to Computer Science — Short Course Description

Every walk of life uses computer science, either directly or indirectly. Knowing what computers can and cannot do and what it takes to program them is a lifting of a veil that the majority of people never peer behind. Those that have a mental model of what computers do can utilize computers well, and utilize people that write software for computers far more realistically. We will be following Harvard's CS50x materials. CS50x is a full-semester course comprising 11 weeks plus a special project. For Deep Springs Term 4 (a half-semester) we will be doing Weeks 0 to 6 of CS50x (seven weeks).

The bulk of our course will be spent learning C, which is the foundation of all modern operating systems. As a warmup to C, Harvard has a little prelude in a language called Scratch. Because Python is practically more important than C for the majority of software developers and computer users, we will conclude with a short introduction to Python. Python hides so much of what the computer has to do to operate on data that many computer scientists judge it to be worthwhile to first learn a lower-level language like C, even if you never use it again, before turning to Python.