

# Python in 3 parts

## A Santa Fe Professional Development Workshop

Tuesday 2020-06-23, Wednesday 2020-06-24, Friday 2020-06-25

*The Institute for Computing in Research  
The Computer Science Alliance*

<https://computinginresearch.org/>  
mark@galassi.org +1-505-629-0759

```
def calculate_path_length(city_list):  
    """Calculates the full length of a path through a list of cities,  
    including the return home from the last city on the list."""  
    total_length = 0  
    for i in range(len(city_list)-1):    ## iterate up to the second-last city  
        c1 = city_list[i]  
        c2 = city_list[i+1]  
        length = distance(c1, c2)
```

The Institute for Computing in Research and the Computer Science Alliance will host a professional development workshop, aimed at CTE teachers in Santa Fe. The course will be taught by Mark Galassi of Los Alamos National Laboratory.

Our goal is to give a solid foundation for Python programming, as well as delving deeply into the ecosystem of advanced libraries for data science and systems programming in Python.

There are no prerequisites except for being a teacher with an interest in programming. We also welcome advanced students who are teaching assistants in computer programming.

This workshop is free for teachers, but space is limited so please sign up by email soon! Dates are flexible, and individual make-up is possible if you have to miss some of the time slots.

### **Session 1** Tuesday 2020-06-23:

**14:00** Elementary python and what characterizes its syntax and semantics.

**15:00** Writing a program with functions.

**16:00** Discussion and debugging together.

### **Session 2** Wednesday 2020-06-24:

**14:00** Python dictionaries: its killer trick.

**15:00** Basics of object-oriented Python.

**16:00** Discussion and debugging together.

### **Session 3** Thursday 2020-06-25:

**14:00** Python for data science and visualization.

**15:00** Python for systems programming: parallelism, networking.

**16:00** Discussion and debugging together.