

CAC 180: Programming in Python

Introduction

Anthony Winchester, Birmingham-Southern College

About Dr. Win

- ❖ I enjoy jogging, traveling, and I am a light gamer
- ❖ After graduating college with a degree in Electrical Engineering at the University of Alabama at Birmingham, I was a Fire Protection Engineer.
- ❖ After leaving my current job, I went back to UAB and earned a MS in Electrical Engineering and then a PhD in Computer Engineering
- ❖
- ❖

Class Details

- ❖ Text: ZyBook
- ❖ Labs: ZyBook
- ❖ Environment / Language: Python in Anaconda

Class Details

❖ Assignments:

1. Four programming projects will be assigned throughout the term; there will be opportunities in class to work on your assignment or in lab
2. Labs will consist of one or more small activities to solidify the topic of that week.
3. A final project will be required (no exam).

❖ Grading:

- ❖ Participation: 10%
- ❖ Programming Projects: 40%
- ❖ Lab Exercises: 25%
- ❖ Midterm: 10%
- ❖ Final Project: 15%

Class Details

❖ Accommodations

❖ Office Hours:

Monday – 2:00 PM - 4:30 PM (Virtual Zoom)

Wednesday – 2:00 PM - 4:30 PM (Virtual Zoom)

What do you view as my
responsibilities?

What do you view as your
responsibilities?

What I view as your responsibilities...

- ❖ Follow the Honor Code - maintain academic integrity
- ❖ Treat your classmates and me with respect
- ❖ Come to class prepared including reading the material and completing the reading quizzes (if applicable)
- ❖ Anticipate doing some independent learning - Ever hear of Google?
- ❖ Ask questions:
 - ❖ to gain a better understanding
 - ❖ to eliminate confusion
 - ❖ to take the topic deeper

Who's Who in Computing

I will include a Who's Who in Computing or two in the materials most weeks. Lookout for some of them possibly being on a quiz.

Ada Lovelace

December 1815 - November 1852

- Daughter of a trained mathematician (“Princess of Parallelograms”) and poet (Lord Byron)
- Met Charles Babbage (father of the computer) and became fascinated with his Analytical Engine
- Lovelace saw further than Babbage and wrote about the idea that the Difference Engine could be used to transform symbols as well as numbers - “first programmer.”
- Her thoughts on the power of the Analytical Engine have been deemed “visionary.”



Why Python?

- ❖ IEEE: Top Language overall
- ❖ Interpreted language
- ❖ High-level data structures built in, Dynamic Typing, Dynamic Binding
- ❖ Rapid Application Development
- ❖ Scripting
- ❖ Extensive library