Intro to Computers & Programming

Introduction

This course is an introduction to art and craft of programming using the python programming language. We will assume no background in programming at all, but by the end of the semester, you should be quite proficient at composing interesting programs.

Programming

This course is very “hands-on” because the only way to learn to program is by programming. We will frequently be working out problems together during the lecture, and there will generally be at least one program assigned for homework each week and at times … each class. Some will be quite straightforward, but some of the others, especially as the course progresses, … 😊 should be more fun …… Very important: please make sure that you set aside sufficient time to work on the programs.

You should first try to work the programs out by yourself. Sometimes this will be easy, sometimes a bit more difficult. If you need to, you can discuss the projects with your classmates, but the assignments you hand in must be your own work. Besides the college policy on plagiarism (and the academic consequences thereof, see: http://cs.nyu.edu/webapps/content/academic/undergrad/academic_integrity), what you gain from the course is directly proportional to what you put in.

Getting Help

Do not let things get out of hand! For many of you, the material in this course will be new and require a different way of thinking and, some of you, might need more time to “get it” than others. That is perfectly natural. But, please, do not be shy about asking for help when and if you need it. You can see me during my office hours (posted on the web site), write to the TA, and there are very knowledgeable tutors available in the computer labs. Please make use of these resources.

Topical Syllabus

Why a “topical syllabus”? 

Each group of students is unique and so, in different classes, we need to spend more or less time on specific topics. We will cover the topics below, more or less in the order indicated. I will be letting you know in class what to prepare for the next few classes.

- Introduction to computers and computing
- The python environment
- Hello World!
- Variables, values and data types and assignment
- Input and output
• Control Structures (if, if/else etc.)
• Repetition Structures (for, while etc.)
• Sequences
• Functions and modules
• Working with text
• Files
• Dictionaries
• Classes and Object Oriented Programming
• additional material in-between and after the above, as time permits

Requirements

• Assignments: 20%
• Weekly Quizzes: 5%
• Midterm 1: 20%
• Midterm 2: 20%
• Final Exam: 35%

How to hand in the homework.

Email the file to the TA at the email address on the web page.