Introduction to Computer Programming I – CSI 31, Sec. D01

Professor: Dr. Luis Fernández
Class times and room: Tu, Th, 10:00 to 11:50 at CP 320.
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Overview of the course.

The goal of this course is to learn how to code in order to make a computer do what you want. The language that will be used to communicate with the computer is called "Python". It is one of the most commonly used languages nowadays for its flexibility, expandability and ease of learning. In the process, you will learn the basics of how computers organize information, how to design programs, and how to expand your knowledge to be able to learn and program in any language. At the end it is expected that the student will be able to:

- Identify the basic design of a computer system and describe some of the topics and techniques of computer science;
- Design an algorithm to solve a given problem using the top-down design approach;
- Translate that algorithm into a computer program;
- Demonstrate understanding of the concept of data type;
- Write functions to solve problems, and understand the notion of procedural abstraction;
- Understand and use the three basic programming structures: sequential execution, decision structures, and repetition;
- Use files for input and output;
- Use objects, including the objects of a graphics library;
- Use strings and lists to manipulate data.

Some resources:

- **Classes:** Attendance is essential to succeed in the class. In class you will have time to learn new material, practice, and ask questions.
- **Meetings with the instructor:** If you need help, or for any other matters concerning the course, you can talk to me during office hours or at other time we arrange.
- **Email:** If you have questions while doing homework and need help quickly, please email me anytime (address above).
- **Finding examples and explanations online:** The internet is the programmer's best friend. If you have a question or you do not understand an error, copy it into your browser and you will find many answers.

Textbook:

- *Python Programming: An Introduction to Computer Science, third edition*, by John Zelle, Franklin, Beedle & Associates, 2016. **You need to have the book** because you will be asked to do exercises from it. You can find it online new or used at a good price.

Highly recommended books and resources:

- *Python crash course, 2nd Edition: A Hands-On, Project-Based Introduction to Programming,* by Eric Matthes. It is a great reference and explains things quickly and effectively.
- DO VISIT THIS SITE: https://www.py4e.com It has great videos, a free book and many resources to learn Python.

Student's responsibilities

- To use the **resources** available (some are above) to attain the main goal: to learn.
- To work on many **exercises**, as it is impossible to learn programming without doing so.
- To **ask** questions during classs or tutorials about anything that has not been understood.

Instructor's responsibilities

- To act as *facilitator* of the learning process of the students, and to assist with any question that students may have about the material.
- To give tests and exams of appropriate difficulty. To grade tests and exams promptly and explain the students the meaning of their grades.

Some Rules

- Tests will not be repeated. The only exception is if the instructor receives notice of the absence (via e-mail or telephone) **on or before the day of the test or quiz**.
- Please do not waste your time in class with your phone or browsing the web. You will have a break in the middle of the class.

Exams and homeworks:

- **Weekly homework and in-class assignments**. Count **30%** of the final grade.
- A **final project**, worth **20%** of the final grade.
- A **midterm**, worth **20%** of the final grade.
- The **final exam** will count **30%** of the final grade.

Notes about programming and homework:

- Programming is only learned by **practice**. It does not get easier, but you get smarter and more experienced.
- **Every** program will have errors when you first compile it. Learning how to fix errors is one of the most important skills you need to learn. Try different things: read the error, find the lines where the error happened (always look at the lines before also). If you do not see where is the error, comment out some lines to narrow your search. Use a debugger if necessary. Do not give up!!
- If something does not work, modify it and see what happens, even if you do not understand what is going on. Using **trial and error** you can write very complicated programs without even knowing the language.
- Only programs that **run** will be accepted in assignments. Even if it does not do what it should, it must run.
- Submission of homework must be done into your folder in Dropbox.

Academic Integrity:

Academic dishonesty (such as plagiarism and cheating) is prohibited at Bronx Community College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the BCC College Catalog.

Accommodations/Disabilities:

Bronx Community College respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact the disAbility Services Office as soon as possible this semester. The disAbility Services specialists will meet with you to discuss the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach the disAbility Services Office at: disability.services@bcc.cuny.edu, Loew Hall, Room 211, (718) 289-5874.