Class Meetings:
Section A1
Tuesday and Thursday
3:30pm – 5:00 pm @ MCS B31

Lab Meetings:
Section A2 Friday 11:00am-12:00pm
Section A3 Friday 1:00pm-2:00pm
@ CS teaching lab (EMA 304)

Course Description
The main goal of this course is an introduction to procedural and object-oriented programming in the Python programming language.

The course goals include: recognizing and understanding the fundamental constructs and patterns present in all programming languages; using abstraction to simplify complex problems into concrete subtasks; literate programming; methodical and efficient development of computer programs using step-wise refinement and incremental testing and debugging.

Our emphasis in teaching programming in this course centers on the following:

1. Programming Concepts – recognizing and understanding the fundamental constructs present in all programming languages
2. Design Methodology – Using abstraction to simplify complex problems into concrete subtasks
3. Algorithmic Thinking – Defining the process used to glean information from data, and being able to convince oneself of its correctness
4. Literate Programming – Writing programs which are clearly structured and can be read by a human as well as a machine
5. Methodical and efficient development of computer programs using step-wise refinement and incremental testing and debugging

Why Python?
Python is a remarkably powerful dynamic programming language that is used in a wide variety of application domains. Some of its distinguishing features include:
- very clear, readable syntax
- intuitive object orientation
- natural expression of procedural code
- very high level dynamic data types
- extensive standard libraries and third party modules for virtually every task
What You Need to Know About Computer Programming

I believe anyone can succeed at learning to program. This is a first course in computer programming, and there are no formal pre-requisites. The only expectation of students' computer skills before taking this class is to be comfortable with using email, web browsing, and copying and pasting text. In addition, familiarity with high school-level algebra (e.g. MA 118) is assumed.

In addition, you will need time, and this is more important than you can imagine. Many people believe that computer programming is extremely difficult, and that the code is written in some arcane syntax understandable only by experts. Although some parts of the process are indeed complex, most of the source code required for homework assignments can be easily understood.

So, what makes programming so hard? It’s not the difficulty: It’s the time required to achieve any decent results. The homework assignments will take time, so make sure you have plenty of it.

Books and Software


Handouts and/or web articles will be assigned for materials not covered in the textbook.

**Online Python Resources:**
- How to Think Like a Computer Scientist, Learning with Python [http://www.ibiblio.org/obp/thinkCSpy/](http://www.ibiblio.org/obp/thinkCSpy/)

**Python Software:** We will be using the Python programming language, which is available for Linux, Windows, and Macintosh computers (among others). Your computer might already have it, or else you can download it from [www.python.org](http://www.python.org).

**IDEs** An Integrated Development Environment is a tool for browsing source code, running programs, and debugging logical errors. You may use any that you like.

The labs have the IDLE IDE installed – it comes with Python. I happen to like the Wing IDE, which you may use if you like. A special version called “Wing 101” is available for free at [https://wingware.com/products](https://wingware.com/products).

**Available at the bookstore, and on reserve at the Science and Engineering Library.**
Grading

The following percentages are tentative and may be changed at my discretion at any time:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance, participation, 2-minute quizzes*, and required labs</td>
<td>10%</td>
</tr>
<tr>
<td>Homework Assignments (about 12)</td>
<td>33% **</td>
</tr>
<tr>
<td>Final Homework</td>
<td>7%</td>
</tr>
<tr>
<td>Scheduled Quizzes (6)</td>
<td>20% **</td>
</tr>
<tr>
<td>Final Exam (written)</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam (lab component)</td>
<td>10%</td>
</tr>
</tbody>
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* 2-minute quizzes are occasional, unannounced, single-question quizzes that will be given sporadically throughout the semester. Points will be awarded for attendance and answering the question correctly. For labs, points will be awarded for attendance as well as submitting your work done during the lab.

** At my discretion, the lowest one homework score, and the lowest one quiz score, will be dropped.

The final homework is required, and its grade will not be dropped under any circumstances.

Getting Help

The homeworks in this class will be challenging, and some will take a significant amount of time to complete. Starting early will ensure success. If you get stuck, the teaching fellow and I are here to help you. The best avenue for getting help is to email your TF, or to come to office hours. Emails will be answered within 24 hours, often sooner.

Withdrawing from the Course

If you feel that you want to drop or withdraw from the class, please come talk to me about it as early as possible; I want to help you succeed, but you need to ask for help. The last day to drop a class (without a “W” grade) is Thursday, February 21, 2008. The last date to withdraw and receive a “W” grade is Friday, March 21, 2008.
Policies and Miscellaneous

Attendance and discussion/asking questions are expected and will be reflected in your grade.
If you must be absent, please email me in advance to let me know why you won’t be in class, and to let me know what you will do to keep up with the assignments. CS108 is not a correspondence course. Inadequate attendance is sufficient grounds for a grade of F.

Assignments are due on the date stated on the homework assignment (to be posted on web).
• Assignments received within 0-24 hours of the deadline will be accepted with a 10% penalty.
• Assignments received within 24-48 hours of the deadline will be accepted with a 20% penalty.
• Assignments received more than 48 hours past the deadline will not be graded.
Plan your work accordingly, and work on all assignments as soon as they are given so you can ask questions in class and get assistance in the labs and tutoring hours.

There will be no make-up quizzes or exams.
If you have to miss a quiz for a medical reason or other extreme circumstances, you must inform me in advance; it will count as your “lowest one quiz score to be dropped.” If you miss more than 1 quiz, you will receive a 0 for each missed quiz.

Grades are not negotiable. Don’t even ask – just do the work and you’ll get the grade you deserve. Of course, please bring any clerical grading errors to my attention by email and I will gladly fix them.

Plagiarism, Collaboration, and Collusion

All CS108 homework assignments are independent work.

It is the student’s responsibility to know and understand the provisions of the CAS Academic Conduct Code, copies of which are available in room CAS 105.

In addition to the definition of plagiarism in the CAS Academic Conduct Code, with respect to CS108, plagiarism is specifically defined to include (but is not limited to) the following:
• collaboration on the code you write
• copying any part of someone else’s program, even if you have modified the code
• sharing or giving your code or even a subset of your code to another student to review
• reviewing another student’s solution (including from past semesters)

What is acceptable cooperation?
Cooperation is recommended in understanding programming concepts and system features. You are encouraged to discuss the labs, the homework problem statements and expected output, and to seek and receive help with the Python programming language and any IDE or other debugging tools.

However, each student must write his or her own code and other deliverables independently.

It is my policy to use automatic plagiarism detection software, and suspicious similarities will be uncovered. I am required by Boston University and the College of Arts and Sciences to refer cases of academic misconduct to the Dean’s Office. The University takes acts of cheating and plagiarism very seriously; first time violators are routinely suspended for a semester.