MTH 3300: Algorithms, Computers, and Programming I

Spring 2019

Course Number: 39940; Section: KTRA

Instructor: Evan Fink

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Office hours: Mondays, Wednesdays 1:00-2:00, and by appointment.

Meeting Time & Location: Tuesdays & Thursdays 2:55PM - 4:35PM, VC 6-130

Recommended Text: The online textbook *How To Think Like a Computer Scientist* by Wentworth, Elkner, Downey and Meyers, available at `http://http://openbookproject.net/thinkcs/python/english3e/` is a good resource that covers many of the things we will talk about, and some that we won't. In additional, I recommend that you get a hard copy of *ANY* introductory Python book; the particular one will not be terribly important, as long as it uses Python 3 (rather than Python 2). Some suggestions, in no particular order: *Python Crash Course* by Eric Matthes; *Python Programming: An Introduction to Computer Science* by John Zelle (NOT FIRST EDITION, but 2nd or 3rd is fine); *Python Programming for the Absolute Beginner, Third Edition* by Michael Dawson; *Introduction to Programming in Python: An Interdisciplinary Approach* by Sedgewick, Wayne and Dondero. None of these books are perfect, but all of them will contain things beyond what the class notes cover, and they should help reinforce and extend your knowledge of Python.

Prerequisite: MTH 2610 or 3006 or 3010, or departmental permission. **Important note: you are not allowed to register for this course if you have previously completed CIS 3120.**

Software: In this course, you will create computer programs. To create these programs at home, you can obtain free software from `https://www.continuum.io/downloads`. Make sure you download the version for your operating system (Windows vs. Mac vs. Linux), and download the Python 3.x version (at the time of this writing, Python 3.7 is available, but a higher version is fine). Please let me know if you have any trouble installing!

Course Policy:

1. Attendence: You are expected to attend every class. Please arrive promptly at the beginning of class. Students may be dropped with a WU grade after 4 absences.
2. Classwork: The best way to learn programming is by doing, and you will spend a substantial amount of class time each period programming on your own. You will not be graded on this, and you should feel free to work in (small) groups, and to ask questions. This time should NOT be spent writing emails or using phones.
3. Classroom Demeanor: It is expected that you do not use phones or computers in class, except for class related purposes. It is also expected that you will refrain from making insensitive remarks and gestures, and that you will not talk in class excessively.
4. Quizzes: There will be 5 minute quizzes in class most days, at the beginning of class. Your lowest two quizzes will be dropped. No make-up quizzes will be given.

5. Assignments: Homework assignments will be assigned on Blackboard frequently, and submitted through Blackboard. A small number of assignments will be written assignments, but most will be programming assignments. In addition, there will be some suggested exercises, not to be turned in.

   Note that unlike most math classes, homework plays a fairly large role in your grade. Furthermore, a document will explain how programming assignments will be graded.

6. Exams: There will be 2 midterms and a final (consult the class schedule for specific dates). According to department policy, any student who scores less than 50% on the final exam **will not receive a passing grade for the course**.

7. Grading:

   Quizzes = 8 %
   Assignments = 29 %
   Midterms = 30%
   Final Exam = 33%

8. Grading Scale: A 93.00, A- 90.00, B+ 87.00, B 83.00, B- 80.00, C+ 77.00, C 73.00, C- 70.00, D+ 67.00, D 60.00, F < 60. I don't intend to alter this scale, but I reserve the right to do so; if I do, it will almost certainly be in your favor.

9. Late Assignment Policy: For full credit, all assignments should be submitted by the due date, by 11:59 PM. I will take off 10 points from the assignment for each day late, but I will give you a total of three penalty-free days late throughout the term (e.g., you could submit one assignment two days late, and another assignment one day late, without penalty; further late submissions would be penalized at 10 points per day).

10. Getting Help: Feel free to make liberal use of office hours – no appointment necessary for scheduled office hours, and I'm willing to make appointments for other times – and to email me any questions you have. Of course, don't forget to utilize the myriad resources of the internet!

11. Collaboration (**important!**): You are encouraged to think about how to proceed on programming assignments and projects with your colleagues. However, when you sit down to code them, it is expected that what you write will be entirely your own work. You are **not** to copy (or "closely paraphrase") your classmates' work.

    Additionally, the following rule must be followed for the coding assignments:

    > You are to report sources and people that you consulted in writing your code (again, copying is NOT acceptable – this is meant for people and sources/websites which gave you hints or inspiration).

    Violation of this rule will result in a report of academic dishonesty to be sent to the Office of the Dean of Students.

12. Academic Honesty: The Department of Mathematics fully supports Baruch College's policy on Academic Honesty which states, in part: "Academic dishonesty is unacceptable and will not be tolerated. Cheating, forgery, plagiarism and collusion in dishonest acts undermine the college's educational mission and the students' personal and intellectual growth. Baruch students are expected to bear individual responsibility for their work, to learn the rules and definitions that underlie the practice of academic integrity, and to uphold its ideals. Ignorance of the rules is not

an acceptable excuse for disobeying them. Any student who attempts to compromise or devalue the academic process will be sanctioned."

Academic sanctions in this class will range from an F on the assugnment to an F in this course. A report of suspected academic dishonesty will be sent to the Office of the Dean of Students. Additional information and definitions can be found at
`http://www.baruch.cuny.edu/academic/academic_honesty.html`.