Introduction to:
Computers & Programming: Administrative Matters

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Outline

• What to Expect from a Intro to CS Class
• Basic Info:
  – Class Schedule, Room Number, Office Hours, Contact Info, Course Webpage
• Policies:
  – Homework, Exams, Grading, Cheating
• What is covered in the Class
  – Materials, Syllabus, Structure of classes
• Installing Python
What to Expect from Intro to CS

• You will learn how to write computer programs:
  – Sets of instructions that computers follow to do solve problems, display images, etc.
  – The end result of creative problem solving

• Skills that are helpful:
  – Ability to follow instructions loosely
  – Experimentation and game play when solving problems
  – Combination of mathematics (especially logic) and creativity
  – Asking questions without fear
  – Willingness to fix things when they don't work (and not being afraid of breaking something).

• My best students varied a lot in their specialties: mathematicians, artists, filmmakers, philosophers, musicians, etc. …
What to Watch Out For

• Computer Science is a type of Math: info is sequential

• Key concepts can hold you back if you don't understand
  – Similar to disciplines including: art, music, math, …

• May be more difficult than a typical “Intro to” Elective

• Do not start this class late in the term

• Do not hesitate to ask questions in class

• Do not do homework late or miss classes (lectures or labs)
  – This can have a substantial effect on test grades
  – There is no (official) penalty for missed classes or late HW (until end of the term), but doing so impedes understanding

• If you don't understand, seek help immediately so you don't fall behind
  – Ask tutors (lab classes, computer labs, etutors)
  – Ask me (office hours, appointment, email)

• If you have trouble & are grade conscious, consider taking class Pass/Fail
Basic Info: CSCI-UA.0002 Spring 2017

• Websites
  – Section 007: http://cs.nyu.edu/courses/fall17/CSCI-UA.0002-007/
  – Section 009: http://cs.nyu.edu/courses/fall17/CSCI-UA.0002-009/
  – CSCI-UA.0002 Website: http://cs.nyu.edu/courses/fall17/CSCI-UA.0002-002/common_syllabus/
  – Professor's Website: https://nlp.cs.nyu.edu/people/meyers.html

• Schedule:

<table>
<thead>
<tr>
<th>Section</th>
<th>Days</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>007</td>
<td>M &amp; W</td>
<td>8:00-9:15AM</td>
<td>60FA 150</td>
</tr>
<tr>
<td>011</td>
<td>M &amp; W</td>
<td>11:00-12:15AM</td>
<td>60FA 110</td>
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  – No Classes: Mon October 9 and Wed November 22
  – “Extra” Class: Tuesday December 12 (Administrative Day: Monday schedule on a Tuesday)
  – Midterms 1 and 2: Wednesday October 11 and Wednesday November 15
  – Final: Same Classroom, Different Timing
    • Section 007: December 20: 8:00AM—9:50
    • Section 011: December 18: 10:00AM-11:50AM (please don't come 1 hour late)
  – Please plan your plane tickets accordingly
  – Permission to take the test for the other section depend on availability (and legal room capacity)

• My office: 60 Fifth Avenue, Rm 301
• Office Hours: Monday: 1:30-3PM or Thursday: 10:30-12PM or by appointment
• Email and Phone: meyers@cs.nyu.edu and 212-998-3482
Website and NYUClasses

• NYUClasses
  – Submitting Homework
    • Usually python code or text
    • Non-programming Homework Should be in pdf form (e.g., scan of drawn flowchart)
  – Getting Grades
  – Course Documents with Licensing Restrictions

• Website – All Other Course Information
  – Schedule, class lectures, sample test questions, python information, etc.
  – Quizzes and supplemental videos
  – Updated throughout the semester (errors fixed, new stuff added)
Grades

• Online Quizzes 5%
• Homework (programming assignments): 20%
• Midterm 1 20%
• Midterm 2 20%
• Final 35%
• All grades are converted to letter grades before averaging (A = 4, A- = 3.7, B+ 3.3, ..., D = 1, F = 0)
Your Grade in Python

• def calc_grade1(Quiz, HW, Mid1, Mid2, Final):
  # Quiz is the average grade for quizzes
  # HW is the average grade for programming assignments
  # Mid1 is your Midterm 1 grade
  # Mid2 is your Midterm 2 grade
  # Final is your grade on the Final Exam
  Grade = (Quiz * .05) + (HW * .2) + (Midterm1 * .20) + (Midterm2 * .20) + (Final * .35)
  return(Grade)

• def calc_grade2(Quiz, HW, Mid1, Mid2, Final):
  Grade = (Quiz *. 05) + (HW *.2) + (max(Midterm1, Midterm2) * .30) + (Final * .45)
  return(Grade)

• def final_grade(Quiz, HW, Mid1, Mid2, Final):
  Grade = max(calc_grade1(Quiz, HW, Mid1, Mid2, Final), calc_grade2(Quiz, HW, Mid1, Mid2, Final))
  return(Grade)

• Bonus for A Grade on 2 Midterms: One A counts as an A+ for purpose of calculating average
Cheating

• Tests, homework and grades are:
  – Tools for assessment of what you did and did not learn
• Cheating is when you copy someone else's work without giving them credit.
• Discussing homework with classmates is not cheating if:
  – Each student produces a different solution and/or
  – Afterwards, each student could solve similar problems on their own
  – For large collaborations, students should cite each other's name on the HW
• Consulting other students on tests is definitely cheating.
• The only reason to cheat is:
  – You think obtaining high grades is more important than learning
    • And you don't think you will be caught
• I have no respect for cheaters:
  – They will fail the class and be reported to the administration
Late Homework, Missing Classes and Grades

- It is Easier to Learn the Material in Class (including labs)
  - Reading online lecture notes is not the same as attending
  - I sometimes present material differently from the modules and from the book
    - For example, I place greater emphasis on writing code using functions
    - This can make relying on online materials more difficult
- Multiple-choice quizzes – no credit if late (but they are not worth very much anyway)
- Programming Assignments: Lateness → Natural Consequences, Fairness and Guilt
  - Natural Consequences
    - Easier to prepare for tests if you have graded homework on the material on the test
    - Doing homework on time makes it easier to keep up because CS is sequential
  - Fairness: The graders mark on-time homework first and then late homeworks
  - Guilt:
    - Graders have lives too – it is an imposition on them when you do late HW
    - They are paid by the hour – if they run out of time, they may not have time to grade your late homework, e.g., they have to pass their classes too
    - Extremely Late HW may never be graded if the grader simply does not have time
  - No Points Taken Off for late programming assignment unless it is the End of the Term and Grader simply does not have time
  - I think these consequences are severe enough without me taking additional points off, which I think would compound the problem
If You Miss a Class, Please keep Up With the Material

• Check the website
• Pay me an office visit
• Consult with a classmate (get their contact info)
• Plan ahead so you can go to the corresponding class in another section (ask me first, please.)
Homework

• Chapters in the Gaddis Book (and some other reading)
• Online modules
• Online multiple choice quizzes after each module (5%)
• Programming Assignments (20%)
  – Each program is judged as follows:
    • Does it solve the problem posed by the assignment
    • Is it clear?
    • Does it work?
    • Do you go beyond the assignment and show that you really know what you are doing? Do you add “bells and whistles”??
Why Does it Matter That I am Teaching 2 Sections

• It is possible to makeup missed classes and exams
  – It is OK to switch classes occasionally, to make up a test or a missed class, etc. as an exception to the rule
    • provided that you let me know (by email) and one class does not become overcrowded and disfunctional.
      – Overcrowding is illegal due to the fire code
    – In terms of make-up classes, the alignment may be imperfect, e.g., if one class ends up going more quickly than the other for any reason (e.g., fire drills, bad weather, etc.)
• Shared office hours (with a 3rd class on another topic as well).
Syllabus

- Introduction to Programming Languages
- Python Basics
- Working with variables and operators
- Control Structures
- Repetition Structures
- Working with Text
- Functions and Modules
- Lists and Dictionaries
- File Input and Output
- Other topics, as time permits
Structure of Classes

• **Types of Classes**
  – 40%: lecture class, sometimes with in-class program
  – 33%: lab-style class.
    • May include material I did not have time for during previous lecture
    • Everyone will do their “homework” in class with the support of T.A.s and myself
    • Finish Homework at Home and send in (approximately 1 assignment per week)
  – 27% Reviews and Tests
    • There are 3 tests and 3 pre-test reviews and 2 post-test reviews out of 29 sessions

• **Laptop Recommended, but if you do not have a laptop**
  – We will partner you with someone who does and you will both include each other's names on your homework so the grader knows who you partnered with.
  – You will be able to get copies of your work by email and submit it later.

• **10 Modules (Online materials) and Associated Quizzes:**
  – Modules: Include short videos and testing of code in workspaces
  – Multiple choice quizzes with strict deadlines, worth a small part of the final grade.
Materials

• **Starting with Python (Third Edition)** by Tony Gaddis
  – Cover most (not all) material in book, as per HW assignments
  – Rate of reading: 1 chapter every 2 or 3 classes
  – Instructions for adapting the 2nd Edition for use with this class

• **Modules: Self-Study Materials on NYU Website**
  – Links on Class Website
  – Matching Quizzes in NYUClasses

• **Slides and Notes from Lectures**: most material available online, but copyrighted material in NYUClasses (just 1 set of slides)

• **Python Documentation** (reference): [https://docs.python.org/3/](https://docs.python.org/3/)

• **Additional material**: How computers work, algorithms, properties of other programming languages, etc.
Install Python ASAP

• Go to www.python.org
• Click on the Download tab
• Download Latest Version of **Python 3** (NOT Python 2)
  – Probably Version 3.6
    • Compatibility issues may be solved by installing slightly earlier version (3.5)
  – For Windows, MAC or Linux
    • * Python 3 for tablets, cell phones exists, but not supported by NYU staff
    • Python 3 for Chromebooks is possible, but difficult
• Install Python
  – If there are installation problems, do not be silent
  – For additional Instructions go to this site and click on “View Instructions”
    • http://cs.nyu.edu/courses/fall17/CSCI-UA.0002-002/common_syllabus/#software
  – If you have a laptop, take your laptop to the **lab tutors**
    • Computer Lab at Kimmel Hall
    • Schedule will be posted at common curriculum website (may start 2nd Week of Classes):
      • http://cs.nyu.edu/courses/fall17/CSCI-UA.0002-002/common_syllabus/#tutoring