Python Programming[*]

CIS 4930 (Section 3)/5930 (Section 3)
Piyush Kumar

Handout #1, – Course Information

Course Web Site. `http://www.compgeom.com/~piyush/teach/py14/`

Class Mailing List. Announcements for the course, homeworks, reading assignments will be available using email and the course web page. Make sure you check both the course web site and your email at least once in two days throughout the semester.

Instructor. Piyush Kumar.
   URL: `http://www.compgeom.com/~piyush`.
   Office Hours: Tuesday, 12:15pm to 1:15pm. Alternatively, you may schedule an appointment, either by email or by phone.
   Phone: 645-2355
   Email: `piyush@acm.org`
   Venue: Office Hours will be held at Love 161 (My Office)

Lectures. Tuesday, Thursday at 11:00am to 12:15pm at MCH 0202.

Teaching Assistant: Rajat

Exams. Finals exams will be held on Monday, April 28th, 5:30 to 7:30pm. Midterm will be held on February 13th in class. Both exams will be closed book. You will be tested on knowledge, understanding, and application of material discussed in class. You will also have some questions testing your ability to creatively solve new problems, using techniques discussed in class. The final exam will be comprehensive.

Course Description. This is a intermediate level course in Python. You will be expected to know the material taught in Data Structures.

Learning Objectives. The objective of this course is to encourage you to learn :

- How to use develop and debug python
- Map problems to pythonic solutions
- Read and understand python code
- Develop oop/design pattern skills with python
- Develop cross-platform gui applications
- Develop graphics applications with python
- Develop internet applications with python
- Design and implement new algorithms in python
- Collaborate and work together with other people to implement bigger projects.

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[*]Preliminary version. I will distribute the final version in the first class.

Prerequisites. A Grade of B or better in COP 3330 or an equivalent course. You should either be registered in the Data Structures course or have already taken it. Come and talk to me if you do not have the prerequisite and you still want to take the course. You should be able to code in C++. Most of the homeworks will ask you to write code.

Textbooks. No textbooks are required for this course.

Software and Hardware Setup: All students are required to have an account on linprog.cs.fsu.edu. You are also required to own a laptop if you are taking this course. The laptop should have a web browser, a wireless card, at least 30 minutes of battery life and an installed version of python 2.7. We will try to help you install python (Operating Systems we can help on are windows, ubuntu, opensuse, archlinux, centos, fedora).

Course Policies

1. **Homeworks:** The best way to learn the material is by solving problems. You are required to work in pairs[1], because the best way to understand the subtleties of the homework problems is to argue about the answers. If you do not have a partner, let me know and I'll try to hook you with one. If you want a divorce, you should let me know too. Don't be a leech and let your partner do all the work. Unless you learn how to solve problems, I *promise* that you will get burned on the exams and thus for your final grade.

2. Your solutions will be submitted and judged using an online judging system. They will also be partially hand checked for documentation, style, design, algorithms and data structures when applicable.

3. Since we plan to use automatic judging software, problem solving exercises will have sharp deadlines. **Late assignments** *will not be accepted* because the solutions will be available.

4. It is extremely important that you *start homework assignments early*. The homeworks are very challenging, and if you get behind in your work, you may find it too difficult to catch up. Out of all the graded homework sets, I will drop the min score before calculating the total homework score towards the final grade. Since I drop the lowest score, missing one homework due to an illness should not be a problem.

5. **Grading Criteria:** The grade for CIS 4930 will be assigned based on the following approximate percentages.

CIS 4930 Grading chart

	Approximate Percentage	Variable
Homework	10%	
Project	30%	
Class Participation (in-class)	5%	
Class Participation (online)	5%	$h \in [0, 50]$
In class problem solving	30%	$f \in [0, 50]$
Midterm	10%	
Final	10%	

To Pass: $h \geq 35$ and $f \geq 35$ (Necessary but not sufficient condition).
CIS 5930: Everything remains the same for graduate students except their projects will be larger in scope. The project percentage would be 50% of the total grade, which would make $h \in [0, 70]$. To Pass: $h \geq 49$ and $f \geq 35$. This number will be scaled down to the interval $[0, 100]$ and a letter grade would be assigned.
Final Grades: Your final grades (letter grades) will depend on your $(h + f) \in [0, 100]$ score. There is no pre-established scale or curve. I will sort all the $(h + f)$ scores for those who pass and assign letter grades to different non-overlapping intervals (The highest level being A and decreasing thereof). I will at my discretion, use clustering to generate the intervals or use the following intervals (Whichever yields you a *better* grade).

Percent	Letter	Percent	Letter	Percent	Letter
94-100	A+	84-87	B+	74-77	C+
90-93	A	80-83	B	70-73	C
88-89	A-	78-79	B-	0-69	F

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[1]Students who have taken any of my previous courses are forbidden to be in the same pair.

6. I reserve the right to modify these numbers uniformly by 5% each. I reserve the right to de-emphasize the homework grades if there is evidence of students who copy instead of doing the homework themselves.

7. **Class Participation:** Participation in class and online, are activities essential to successful learning and should reflect your *reading, analysis, and experience in relation to the topic.* Class participation grading will be broken into two parts: Your discussions online and your discussions in class. Your discussions online will be graded for 5% of the class grading. This will mainly be for your comments/notes on class slides. While reading slides, we expect you to do research about the material, learn it well, and help others learn the material. In order to help you review reading material, I will provide some review questions after lectures. This will cover both, material discussed in the current lecture, and material to prepare you for the next lecture. You should be prepared to answer these questions in the next lecture. Apart from this, I will ask other questions in class. You too should feel free to ask questions on material that you do not understand, offer suggestions on improving ideas presented in class, and make other positive contributions to the learning experience in class. All these will count towards your in-class participation.

8. Scribing will be worth *approximately* 4 or 5 percentage points of extra credit (This option is only for people who know how to use powerpoint/html/css/js well or are willing to put the effort to learn it).

9. **Missed exam Policy:** A missed exam will be recorded as a grade of zero. We will follow the university rules regarding missed final exams (see `http://registrar.fsu.edu/dir_class/fall/exam_schedule.htm`), for all the exams, including the final exam.

10. **Grade of 'I' Policy:** The grade of 'I' will be assigned only under the following exceptional circumstances:

    - The final exam is missed with an accepted excuse for the absence. In this case, the final exam must be made up during the first two weeks of the following semester.
    - Due to an extended illness or other extraordinary circumstance, with appropriate documentation, the student is unable to participate in class for an extended period. In this case, arrangements must be made to make up the missed portion of the course prior to the end of the next semester.

11. **Academic Honor Code:** Because a primary goal of the course is to teach professionalism, any academic dishonesty will be viewed as evidence that this goal has not been achieved, and will be grounded for receiving a grade of F (You must read the FSU Academic Honor Code in the Student Handbook and abide by it). Copying/Modifying other people's programs/code will be treated the same as copying in an exam.

    - Every student must write his/her own code and homework. Showing your code or homework to members of other teams, giving it to them, or making it accessible to them (e.g., by making the files world-readable) is academic dishonesty. You are responsible for ensuring that your code/documentation/results and homeworks are adequately protected and not accessible to others. Change permissions of your working directory to 0700 (chmod 0700 {directory}).
    - Consulting code from a textbook, or from the Internet, in order to understand specific aspects of your assignment is fine. However, *copying entire code or large parts of such code will be considered academic dishonesty.* If you borrow small parts of code from these sources, you must acknowledge this in your submission and additionally you must clearly understand and be able to explain how the code works.

    Once again: There is no excuse for cheating in any circumstances. See me before you even *contemplate* cheating.

12. **Accommodation for Disabilities:** If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I would urge that you contact the staff in the Student Disability Center and bring a letter to the instructor indicating the need for accommodation. The Student Disability Resource Center will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. They can be contacted at (850) 644-9566.

13. **Attendance Policy:** The university requires attendance in all classes, and it is also important to your learning. The attendance record may be provided to deans who request it. If your grade is just a little below the cutoff for a higher grade, your attendance will be one of the factors that we consider, in deciding whether to "bump" you up to the higher grade. Missing three or fewer lectures will be considered good attendance. In rare cases, such as medical needs or jury duty, absences may be excused with appropriate documentation. You should let me know in advance, when possible, and submit the documentation I seek. You should make up for any materials missed due to absences.

14. **Syllabus Change Policy:** The syllabus is guide to the course and subject to change with advanced notice.

15. **Course Project:** The course project is a semester wide project which will be assigned towards the beginning of the course. A basic template for the project will be provided. At most 4 students can work on the same project. All course/project work will be BSD Licensed and will be done on a mercurial repository in Bitbucket. We will closely monitor your individual contributions to the project. Your grade for the project will be based on:

    (a) How far you have come compared to the initial scope defined for the project.

    (b) How much your contribution is. Defined by:
    - Number of lines of your code
    - If Applicable: Artwork, html/css/js frontend coding
    - How well you understand the complete codebase.
    - Code documentation
    - Testing/Coverage
    - Scripting
    - Initial scoping
    - Other factors decided at the time of scoping

    (c) How good your code is. (PEP8, code organization, coverage, complexity, test system, build system, documentation)

    (d) Rankings from your team members as well as by the course staff.

    The grading will be done twice, once near the midterm and once near the final exam. At both milestones, a complete evaluation will be done.