



# Course Essentials

## 1 Communications and Meetings

Class Meetings: There are planned meetings. See the schedule here.  
Office: HN1090J  
Office Hours: Mondays, 12:00 - 14:00  
Email: [stewart.weiss@hunter.cuny.edu](mailto:stewart.weiss@hunter.cuny.edu)  
Telephone: (212) 772-5469

**It is critical that you read your Hunter email at least once per day, and that, if I send email to you that requires a response, you respond within a day, unless I state otherwise.** Because this is an independent study project in which you are learning to be a collaborator, an important responsibility is timeliness of response to your colleagues and to me.

Regarding email, please note that I will not read email containing MicroSoft Word-encoded documents. If you need to attach a document, it must be plain text or a PDF. Note too that all email must be sent from your “myhunter” account. It is a violation of federal law to have an email conversation about school-related matters using a non-school account (because it might be insecure and open to viewing by third-parties.)

You can see me during my office hours without an appointment. If you need to see me at a different time, you need an appointment. The best way to make an appointment is to send me email with a few suggested times. You can also call my office and leave a message.

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## 2 Textbooks

There are a number of books that will be useful for this course. You do not have to purchase any of them. The ones that I use are all available on-line for free. The course website has links to them.

***Producing Open Source Software***, 2nd edition, Karl Fogel  
<http://producingoss.com>

A book about creating open source software, but it has many relevant chapters for those who want to participate in an existing project.

***The Architecture of Open Source Applications***, Amy Brown and Greg Wilson (editors)  
<http://www.aosabook.org/en/index.html>

A collection of articles in which each chapter describes the architecture of an open source application, including how it is structured, how its parts interact, why it is built that way, and what lessons have been learned that can be applied to other big design problems.

***Practical Open Source Software Exploration***, Greg DeKoenigsberg, Chris Tyler, Karsten Wade, Max Spevack, Mel Chua, and Jeff Sheltren

[https://quaid.fedorapeople.org/TOS/Practical\\_Open\\_Source\\_Software\\_Exploration/html](https://quaid.fedorapeople.org/TOS/Practical_Open_Source_Software_Exploration/html)  
Although this book was last revised in 2010, much of its content is independent of its age, and it is very relevant to anyone considering working in the open source community.

***ProGit, 2nd edition***, Scott Chacon and Ben Straub  
<https://git-scm.com/book/en/v2>

This is an excellent tutorial and reference on using git (not GitHub).



*The Linux Command Line*, William Shotts

<http://linuxcommand.org/tlcl.php>

There are many books about how to use bash and the Linux command line. This one is very accessible and easy to follow.

### 3 Web Resources

- All course materials, including lecture notes, slides, assignments, syllabus, and other resources, including this document, are posted on my website:  
[http://www.compsci.hunter.cuny.edu/~sweiss/course\\_materials/cs\\_ossd/cs\\_ossd\\_f18.php](http://www.compsci.hunter.cuny.edu/~sweiss/course_materials/cs_ossd/cs_ossd_f18.php)
- In addition, we will be using GitHub for various materials. You will all be part of the GitHub organization, `hunter-college-cs-ossd`.
- This class will use Piazza as a discussion board. Please see Course Materials, the Web, Piazza, and Blackboard below for the details.

### 4 Objectives

Among the (deliverable) outcomes of this project are that

- the student will become a contributing member of a software development community and have documented evidence of their contribution; and
- the student will document their efforts on this project by creating a blog that chronicles their work.

Specific technology that the student will explore and learn to use well includes:

- version control systems (e.g., git)
- issue trackers
- communication channels
- documentation and wikis
- linux/unix programming environment

### 5 Prerequisites

All students should have completed the first three programming courses, CSci 127, 135, and 235, and Math 150.

### 6 Course Structure

This instance of this course is a collection of independent study projects with a relatively small group of students. Much of the learning is through independent activities, and much of the communication and delivery of materials is over the web, using a combination of Piazza, the course website, and GitHub.

Because there are no official class meeting times, the number of hours allocated to each topic in our syllabus is not constrained by the college's contact hour limits. Planned meeting times can be found in the document [http://www.compsci.hunter.cuny.edu/~sweiss/course\\_materials/ossd\\_course/planned\\_meetings.html](http://www.compsci.hunter.cuny.edu/~sweiss/course_materials/ossd_course/planned_meetings.html).

Students should expect to work about one hundred hours for this project over the course of the semester.



## 7 Syllabus

1. Context and Overview
  - (a) Open-ness in general: open source, open data, open hardware, etc.
  - (b) History and background of open source software
  - (c) Open source culture and community
2. Contributing to Projects
  - (a) Early and Easy Contributions
    - open wikis
    - open maps
  - (b) Types of contributions to software projects
  - (c) Ways of getting involved
3. Tools and Technology
  - (a) Programming Tools and Technology
    - markdown, make, gdb, Unix shells
  - (b) Software engineering tools required for group software projects
    - version control systems (e.g., git)
    - issue tracking
    - documentation tools (e.g., Doxygen)
  - (c) Software engineering tools specific to distributed group projects
    - communication tools
    - remote, distributed version control (GitHub)
    - online, web-based issue trackers
4. Intellectual Property Rights and Licensing
  - (a) types of licenses
  - (b) licensing your own work
  - (c) avoiding plagiarism
5. Project Evaluation and Studies
  - Evaluating the suitability of a project for the purpose of their contributing to it.
6. Team Selection
7. Project Selection/Assignment
  - (a) Getting involved in the community
  - (b) Setting up project development environment
  - (c) Picking some issues to work on
  - (d) Solving the issues and issuing pull requests
8. Team Reports



## 8 Assignments, Exams, and Grading

The grade will be based upon a weighted average of contributions, homeworks, participation (which includes attending meetings), and one or more exams. To be precise,

- contributions (30%) are pull requests that have been accepted, or those that were not accepted but, in my judgment deserve to be treated as if they were accepted;
- homeworks (30%) are work that you submit in response to assignments that I post on the website or distribute in class;
- participation (20%) includes attending meetings, completing the weekly blog posts, and oral presentations made to the group; and
- exams (20%) are written exams given near the middle and the end of the semester, based on all material learned up to that point. These exams may be online exams (given on Blackboard, for example).

## 9 Lateness and Incomplete Grades

Work that has a deadline, such as a weekly blog post, or a homework assignment, must be submitted by that deadline if it is to receive a non-zero grade. Work that has no deadline, such as a contribution to an existing project, has no such requirement. Unless there are extenuating circumstances, I will not give a grade of INC in this project. Let us all make an effort to meet our challenges in a timely way!

## 10 Programming and System Access

Everyone enrolled in this class has already taken classes at Hunter and should be familiar with the computing facilities. Hence this syllabus does not describe them. Everyone should have an account on the Computer Science Department's network. Anyone who does not should notify me immediately, so that I can have one created.

As a reminder, some of the important rules that must be followed when you are physically in the lab and using one of the lab's computers are:

- Never power down a machine for any reason.
- Never leave a machine without logging out.
- Never use lockscreen to lock the screen in your login.

There are other rules. The Department's *System Administrator*, Tom Walter, maintains a webpage: [http://www.geography.hunter.cuny.edu/tbw/CS.Linux.Lab.FAQ/department\\_of\\_computer\\_science.faq.htm](http://www.geography.hunter.cuny.edu/tbw/CS.Linux.Lab.FAQ/department_of_computer_science.faq.htm), that contains useful advice, help, rules, and information about the labs. You must read this webpage to make sure you know what is allowed and what is not allowed.

## 11 Course Materials, the Web, Piazza, and Blackboard

All lecture notes will be posted on the course's home webpage (whose URL is above), which does not require special privileges to access. The only thing for which I use Blackboard is for posting of grades, which will be posted in the grade center there. This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and me. Rather than emailing questions to me, you are to post your questions on Piazza. If you have any problems or need feedback for the developers, email [team@piazza.com](mailto:team@piazza.com).

You can find our class page at:



[piazza.com/hunter.cuny/fall2018/cs39302/home](https://piazza.com/hunter.cuny/fall2018/cs39302/home).

An invitation to join the Piazza discussion board will be sent to your Hunter College email address close to the start of the semester. You should accept this invitation. Your Hunter email address can be used for reading and sending messages to the group, or you can change the email address or add another on the settings page. In fact, you can request to join the group with any email address you choose, at

[piazza.com/hunter.cuny/fall2018/cs39302](https://piazza.com/hunter.cuny/fall2018/cs39302)

I require that you use the following protocol if you have a question:

1. Check whether the question you want to ask has been posted and answered on Piazza.
2. If it has been answered, you are finished. If not, post the question on Piazza.
3. Anyone in the class can answer the question. If no one else answers the question in a timely manner, I will post an answer to it.

I will ignore any non-personal questions sent to my Hunter email address. Personal questions (such as a questions about a grade or a missed class or alternative times to meet with me) should be sent via private email to my Hunter email address, not to Piazza.

## 12 Academic Honesty

Unless I state otherwise, all assignments and projects are to be your work alone. If someone else does part of this for you, it is considered to be academic dishonesty. Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. In this class, I will enforce the University's Policy on Academic Integrity and bring any violations that I discover to the attention of the Dean of Students Office.

## 13 ADA Compliance

In compliance with the *American Disability Act of 1990* (ADA) and with *Section 504 of the Rehabilitation Act of 1973*, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (emotional, medical, physical and/or learning) consult the *Office of AccessABILITY* located in Room E1124 to secure necessary academic accommodations. For further information and assistance, the student can call (212-772-4857)/TTY (212-650- 3230).

## 14 Hunter College Policy on Sexual Misconduct

In compliance with the *CUNY Policy on Sexual Misconduct*, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the *Bill of Rights for Hunter College*.

- **Sexual Violence:** Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).
- **All Other Forms of Sexual Misconduct:** Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose ([jtrose@hunter.cuny.edu](mailto:jtrose@hunter.cuny.edu) or 212-650-3262) or Colleen Barry ([colleen.barry@hunter.cuny.edu](mailto:colleen.barry@hunter.cuny.edu) or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.



- CUNY Policy on Sexual Misconduct Link:<http://www.cuny.edu/about/administration/offices/1a/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

## **15 Changes to This Syllabus**

Except for changes that substantially affect the implementation of the grading statement, this syllabus is a guide for the course and is subject to change with advance notice. Any changes will be posted to the course website and to the Piazza group for the course.