

CSCI 15000 §01 # 14000 and recitations

Discrete Structures Spring 2023

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Text: Epp, Susanna S.; *Discrete Mathematics with Applications, Fourth Edition*; Brooks/Cole–CENGAGE Learning; 2011; ISBN-13 978-0-495-39132-6

Web: Useful links, including an updated version of this syllabus and all the home work assignments, are available on <http://www.cs.hunter.cuny.edu/~eschweit/150stuff/150.html>

Quizzes and exams will be scanned into GradeScope (www.gradescope.com). Your grades will be available there. The instructor will create accounts based on your CUNYfirst data. Be sure to check your “myhunter” account for email from GradeScope after the first week of class.

Finding your Lecturer Eric can be reached to make appointments etc. by contacting him before or after class, by phoning his office at (212)772-4349, by stopping up at his office (N-1000E) during scheduled office hours (Mondays 3:30-4:00, Wednesday 4:30-5:30 and Thursdays 3:30-4:00), or (by far the best way) by sending him e-mail at eric.schweitzer@hunter.cuny.edu. Please note that he will only read plain ASCII text email, not HTML or MicroSoft Word encoded documents. Also note that any email concerning anything that might fall under the FERPA regulations (e.g. questions about grades or other class related issues) *must* be sent from your “myhunter” account.

In addition, if the school is open, messages can be left for him at the Computer Science Department office, which is located in N-1008 and is reachable at (212)772-5213.

Finding your Recitation Instructors All Monday recitation sections (1R01, 1R02, 1R03 and 1R04) are taught by Morgan Wajda-Levie, who can be reached at MORGAN.WAJDALEVIE93@myhunter.cuny.edu.

The Tuesday recitation (CSHR) is taught by Susan Epstein, who can be reached at susan.epstein@hunter.cuny.edu.

All Wednesday recitations (1R09 and 1R10) are taught by Enxhi Osmanllari, who can be reached at eo772@hunter.cuny.edu.

All Thursday recitations (1R05, 1R06, 1R07, 1R08) are taught by Arezoo Bybordi, who can be reached at abybordi@gradcenter.cuny.edu.

Your recitation instructors will supply additional information about what will happen in their classroom.

Learning Outcomes The successful student will acquire the mathematical foundations needed for later computer science classes such as automata theory, cryptography, relational database theory, data structures, etc. She will understand and be able to construct proofs, especially those involving discrete structures. She will demonstrate this mastery by solving problems and supplying proofs

on written instruments such as home work, quizzes, and exams. This class directly supports Departmental Learning Outcomes 1A (“demonstrate an understanding of the basic foundations ... of mathematics and statistics ...”) and 1C (“display knowledge of the theory of computation and algorithms”).

Lectures, Recitations and Tutoring You should be scheduled for three “hours” (150 minutes) of lecture and one “hour” (50 minutes) of recitations each week. Although lectures are large classes that tend to have “one way” communication, questions are encouraged. Of course with a class of over 300 there is not enough time for all questions to be answered. That is why you will meet in smaller groups (recitations). That is your opportunity to ask questions and discuss home work problems. If you want to succeed in this class you should show up for your recitation having attempted all the assigned homework.

To get the most out of the lectures, you would do well to read ahead in the text book. To get the most out of the recitations, you should have attempted all the assigned problems.

If you find you need more assistance than is available in recitations, you are encouraged to use the tutoring services at Dolciani Learning Center. The tutors for this class are UTAs and recitation instructors. The schedule is here: <http://www.hunter.cuny.edu/dolciani/hours/tutoring>

Grades: Note that the following assumes we are meeting in a classroom. If we are forced on-line during the semester some of it will have to change.

Grades will be based your recitation grade, one final exam, and approximately twelve to fifteen quizzes.

- The quizzes will take place some time during randomly selected classes. Each quiz is worth 10 points, the conglomeration of which will total to 50% of your grade (no matter how many quizzes there actually are). Missed quizzes can not be made up. Unless you request otherwise, your ten best quiz grades will be used. Thus, you can miss at least two quizzes for any reason.
- The Final will be given at the appointed hour during finals week. This is currently Thursday, May 18, from 1:45 to 3:45, however the College may change this schedule. The Final will be 40% of your grade.
- Your recitation instructor will supply the remaining 10% of your grade. They will discuss exactly what this is based on in recitation.

I do not give “extra credit” assignments. Do not expect to be able to pull up your grade by doing additional work. Do your work first, on time, and avoid the problem. I can not stress “*do the assigned homework problems*” enough. The only way to do well in the class is to do well on the quizzes and exam. The best way to do well on the quizzes and exam is to do the assigned problems. Do them before recitation. Do them again before the exam. Do some unassigned problems if you want more practise. Be confident that you can do the problems before you take the quiz. Do NOT watch a YouTube video of someone working a problem and think you know how to do it.

In The Classroom During “regular” lectures you are asked to sit in the front of the assembly hall. You may not use the balcony. Seats that you should not use will be roped off. You may not sit next to anyone during a quiz, there must be an empty seat or isle between each student.

During the finals you will be asked to sit in “every other” row. This will allow TAs and your lecturer to get to people who may have questions. You will also be asked not to sit next to anyone else.

Finally, you should bring your Hunter ID card to every class and the final exam. Expect to have your name, face and picture compared.

Topics: We will try (and probably not succeed) to cover the following topics according to this schedule. Note that a “week” is three lectures:

week	subject	chapter
1	Introduction and Compound Statements	Ch.1, 2.1
2	Compound statements and Arguments	2.2-2.4
3	Predicates and Quantification, Arguments	3.1-3.3
4	Arguments and Direct Proofs	3.3, 4.1, 4.3
5	Direct proofs and indirect proofs	4.4, 4.5
6	Indirect Proofs	4.6-4.7
7	Sequences and Induction	5.1-5.3
8	Complete Induction and Recursive Definitions	5.3-5.6
9	Recurrence relations, Sets and Russel’s paradox	5.7, 6.1, 6.2, 6.4
10	Functions, composition, bijections	7.1-7.3
11	Cardinality, Counting and Cantor diagonalization	7.4, 9.1
12	Pigeonhole principal, $\binom{n}{r}$	9.2, 9.3
13	Probability, Bayes’ theorem	9.4, 9.5, 9.9
14	Graphs, Paths, Trees	10.1-10.5
	FINAL EXAM	

Policy on Academic Integrity: 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.

Policy on Bullying: Bullying, cyberbullying, online hate, intimidation, threats, harassment, and pressure to share schoolwork are all forms of violence. CUNY holds a zero tolerance stance towards all such acts. The University is committed to prevention of any form of bullying, will respond promptly to threats and/or acts, and will protect victims of bullying from retaliation. As a criminal matter, the New York Attorney General defines cyberbullying as the use of email, websites, instant messaging, chat rooms, text messaging and digital cameras to antagonize and intimidate others. Disrupting a teleconferencing platform (such as Zoom/Skype/Blackboard Collaborate Ultra) is a federal crime.

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 please call (212-772-4857)/TTY (212-650-3230).

Personal Protective Equipment and other COVID matters: Whatever rules CUNY or Hunter put in place will be enforced. Remember that these rules can change with little warning.

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.

a. 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).

b. 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 or 212-650-3262) or Colleen Barry (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/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

Electronics We expect all cell phones, pagers, etc. to be inaudible during class. We expect laptops and other electronic devices, if used, to be used only for class related activities. Activities not related to class include but are not limited to facebook, twitter, other social networking web sites, "surfing", email, mu*s, hulu, southparkstudios, etc. Any student with an electronic device that disrupts the class or is used for anything other than class related activities will lose two (2) points from their final average (per occurrence).

Note that details of this document are subject to change if the need arises.