Computer Theory 1
CSCI 26500
Spring 2021

Instructor: Dr. Sarah Ita Levitan
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Class time: Tuesday & Friday, 9:45-11am
Where: Online, synchronous classes on Zoom

Instructor office hours: Tuesdays 11am-12pm on Zoom
TA office hours: TBA

Course Description:
Computer Theory 1 will introduce you to formal models of computation, specifically: finite automata, pushdown automata, and Turing machines. We study these for many reasons, both theoretical and practical. Importantly, they provide insight into what can and cannot be computed, and how efficiently different types of problems can be solved. Since this is a course in theory, there is a significant amount of abstract math, especially in the form of formal definitions, algorithms, theorems, and proofs.

Learning Outcomes:
The student will learn concepts and formal definitions from topics including automata theory, formal languages, determinism, computability, and complexity theory. The student will be able to follow and write proofs regarding properties of formal languages and their automata, using a variety of formal and informal proof techniques. This will include designing automata, expressions, and/or grammars to describe formal languages.

Prerequisites
Computer Architecture I (CSCI 160 or 145)
Calculus I (MATH 150)

Textbook
Introduction to the Theory of Computation, Michael Sipser. 2nd Edition.
The textbook is underlined required. There will be regularly assigned readings and homework problems from the book.

Communication
We will use Piazza for class discussions and for posting questions. The system is highly catered to getting you help fast and efficiently from classmates, TAs, and the instructor. Rather than emailing questions to the teaching staff, post your questions on Piazza. You will earn participation points for answering your classmates' questions on Piazza.
Find our class signup link at: https://piazza.com/hunter.cuny/spring2021/csci265

Schedule (subject to adjustment)
January 29 - March 5: Introduction, Finite Automata, and Regular Languages
March 9 - April 9: Pushdown Automata and Context-Free Grammars
April 13 - May 14: Turing Machines and Recursive Languages

Important dates:
Friday, February 12: Lincoln's Birthday; no class
March 27 - April 4: Spring Recess, no sessions
Tuesday April 13: Last day to withdraw with a W
Monday, May 24: Final exam, 9-11am

Grade Breakdown
Participation: 15%
Homework: 10%
Quizzes: 50%
Final: 25%

The Hunter College grading scale is as follows:

A+	97.5 - 100	C+	77.5 – 79.9
A	92.5 - 97.4	C	70.0 – 77.4
A-	90.0 - 92.4	D	60.0 - 69.9
B+	87.5 - 89.9	F	0.0 – 59.9
B	82.5 – 87.4		
B-	80.0 – 82.4		

Online Course Policies
Students are required to be visible on video via cameras in this course.
An online proctoring tool may be used in this course.
If in-person testing becomes available, we may have an in-person final exam.

Hunter College 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.

ADA Policy

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 E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772-4857 or (212) 650-3230.

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 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.