

Department of Computer Science, Hunter College
Computer Theory I (CSCI 265, Section 003), Fall 2020
Tuesdays and Thursdays, 7:00PM-8:15PM
Instructor Jordi Navarrette, jnavarr@hunter.cuny.edu

Course Description: This course is the first of two covering the theoretical underpinning of automated computation, focusing on regular and context-free languages, and their corresponding automata. Beginning with a general introduction to formal languages and a review of the required proof theory, the study of these language classes will also include practical applications. A brief preview of Turing machines will end the course.

Expected 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) and Calculus I (Math 150).

Textbook: Introduction to Automata Theory, Languages, and Computation, 3rd Edition. Hopcroft, Motwani, Ullman. 2006.

Planned Schedule by Topics and Assessment:

Introduction, FAs and Regular Languages (Ch. 1-4)	8/27-10/1	Midterm 1	10/6
PDAs and Context-Free Languages (Ch. 5-7)	10/8-11/3	Midterm 2	11/10
TMs and Recursive Languages (Ch. 8-10)	11/5-12/8	Final	12/17

Class Policy: Unlike normal semesters, our class will be conducted entirely online. Preview videos will be posted, and synchronous lectures, which **WILL NOT BE RECORDED AND POSTED FOR LATER REFERENCE**, will be conducted using Blackboard Collaborate Ultra. Homework and exams will also be conducted on Blackboard, with **EXAMS EMPLOYING WEBCAMS AND SCREENSHARE SOFTWARE TO ENSURE ACADEMIC INTEGRITY**. No class meetings will be used for “review” – such concerns are to be posted on the discussion boards. Students are responsible for keeping up with all communications, including whether they are made through announcements, emails, discussion board posts, or during recorded lectures. Emails sent by students will be responded to within one business day.

Grading: Do not misunderstand our circumstances – when it comes to grading, I am not interested in your career goals or what this class means to them, what grade you want or need to meet some aim, how many times you took this course, how badly you need to pass, etc. **GRADES WILL BE DETERMINED SOLELY BY YOUR WORK IN THIS CLASS, ACCORDING TO THE FOLLOWING BREAKDOWN, WITHOUT EXCEPTION!**

Due to the online format, homework will only add to your grade, and never diminish it. In particular, up to 40% of your grade can be earned through homework. Whatever is not earned through homework will be determined by exams, proportionally divided into six units. There will be two midterm exams and one cumulative final. The higher-scoring midterm counts as two exam units. The lower-scoring midterm counts as one exam unit if the score is higher than that of the final, in which case the final exam counts as three exam units. Otherwise, the lower-scoring midterm is dropped, and the final exam counts for four exam units. **THERE WILL BE NO MAKE-UP EXAMS AND NO EXTENTIONS ON HOMEWORK, NO EXCEPTION!**

Letter grades will be assigned from final numerical grades according to the standard conversion. Students may request Credit/No Credit up until the moment before they start the Final Exam. (“C” or better is “Credit,” while “D” or “F” becomes “No Credit.”)

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.

If you have a disability that you believe requires special accommodations: 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).

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.