

SYLLABUS: CSI 30 Spring 2024

Professor: Jorge Pineiro

Email: jorge.pineiro@bcc.cuny.edu

Time and Place: M/W from 10:00 to 11:15 AM. Room CP 305 .

Textbook: Discrete Mathematics and its Applications, Eighth Edition, by Kenneth H. Rosen, published by McGraw-Hill 2019.

Class	Day	Section	Description
1	Mon: 1/29	1.1	Propositional Logic
2	Wed: 1/31	1.2	Applications of Propositional Logic
3	Mon: 2/5	1.3	Propositional Equivalences
4	Wed 2/7	1.4	Predicates and Quantifiers
5	Wed: 2/14	1.5	Nested Quantifiers
6	Wed: 2/21	1.6	Rules of Inference
7	Th: 2/22	1.6	Rules of Inference continued
8	Mon: 2/26		Review of Chapter 1
9	Wed: 2/28		First Exam on Chapter 1
10	Mon: 3/4	2.1	Sets, power sets, Cartesian products.
11	Wed: 3/6	2.2	Set operations. Set identities.
12	Mon: 3/11	2.3	One-to-one and onto functions.
13	Wed: 3/13	2.3	Inverse and composition of functions.
14	Mon: 3/18	2.6	Matrix Arithmetic.
15	Wed: 3/20		Second Exam on Chapter 2
16	Mon: 3/25	3.1	Algorithms. Pseudocode.
17	Wed: 3/27	3.1	Sorting. Greedy algorithms.
18	Mon: 4/1	4.1	Division. The division algorithm. Modular arithmetic.
19	Wed: 4/3	4.5	Applications of congruences
20	Mon: 4/8	4.3	Primes. Fundamental Theorem of Arithmetic.
21	Wed: 4/10	4.2	Representations of integers. Algorithms for integer operations.
22	Mon: 4/15	6.1	Basic counting principles.
23	Wed: 4/17		Counting continued. Third Exam take home.
24	Mon: 4/22		Spring Break
25	Wed: 4/24		Spring Break
26	Mon: 4/29		Spring Break
27	Wed: 5/01	6.1	Principle of inclusions and exclusions.
28	Mon: 5/06	6.3	Permutations and combinations.
29	Wed: 5/08	6.4	Binomial coefficients.
30	Mon: 5/13	7.1	Introduction to probability
31	Wed: 5/15		Review for Final Exam

Academic Integrity: Academic dishonesty (such as plagiarism and cheating) is prohibited at Bronx Community College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the BCC College Catalog.

Accommodations/Disabilities: Bronx Community College respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact the disAbility Services Office as soon as possible this semester. The disAbility Services specialists will meet with you to discuss the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach the disAbility Services Office at: disability.services@bcc.cuny.edu, Loew Hall, Room 211, (718) 289-5874.

Grading:

1. There will be three tests during the semester: **First Exam, Second Exam** and **Third Exam**.
2. There will be a **Final Exam** at the end of the semester.
3. The evaluation will be a combination of the First Exam, Second Exam, Third Exam and the Final exam.