CS 225_40X: Discrete Structures in CS (Spring 2023)

Abbreviated Weekly Schedule*:

To summarize, the weekly homework assignments, initial and final posts of bi-weekly discussions are due by 11:59 pm (Pacific Time) on Tuesdays (except week 10) and the bi-weekly/fortnightly quizzes on materials covered in the prior weeks and reply posts of the discussions are due by 11:59 pm (Pacific Time) on Fridays. Please make sure that you have submitted the assignments, discussion responses, and quizzes via Canvas.
***This schedule is subject to change. Changes, if necessary, will be updated here and posted via Canvas/Ed Discussion announcements.**

Week	Course Topics (followed the 5th edition of the required textbook)
#1 Assignments due: April 11, 2023 Syllabus Quiz due: April 21, 2023	• Chapter 2: Section – 2.1 Logical Form and Logical Equivalence • Chapter 2: Section – 2.2 Conditional Statements
#2 Assignments due: April 18, 2023 Extra Credit Assignment due: April 18, 2023	• Chapter 3: Section – (3.1 to 3.2) Predicates and Quantified Statements • Chapter 5: Section – (5.1 to 5.2) Sequences and Summations
#3 Assignments due: April 25, 2023 Quiz 1 due: April 28, 2023	• Chapter 4: Section – (4.1 to 4.5) Direct Proof and Counterexample • Chapter 4: Section – 4.7 Indirect Argument: Contraposition • Chapter 4: Section – (4.7 to 4.8) Indirect Argument: Contradiction and Two Classical Theorems
#4 Assignments due: May 02, 2023 Canvas discussion due (initial post): May 02, 2023 Canvas discussion due (reply post): May 05, 2023 Canvas discussion due (final post): May 09, 2023	• Chapter 6: Section – 6.1 Set Theory: Definitions and Element Method of Proof • Chapter 6: Section – (6.2 to 6.3) Properties of Sets and Disproofs, Algebraic Proofs

Week	Course Topics (followed the 5th edition of the required textbook)
#5 **Assignments due:** **May 09, 2023**	• Chapter 5: Section – (5.2 to 5.3) Mathematical Induction: Weak Induction • Chapter 5: Section – 5.4 Strong Mathematical Induction
#6 **Assignment due:** **May 16, 2023** **Canvas discussion due (initial post):** **May 23, 2023** **Canvas discussion due (reply post):** **May 26, 2023** **Canvas discussion due (final post):** **May 30, 2023**	• Chapter 5: Section – (5.6, 5.7, and 5.9) Recursive Definitions
#7 **Assignments due:** **May 23, 2023**	• Chapter 9: Section – (9.2 to 9.3) Basic Counting Rules: Multiplication and Addition Rule • Chapter 9: Section – 9.4 The Pigeonhole Principle
#8 Assignments due: **May 30, 2023** **Quiz 2 due:** **June 09, 2023**	• Chapter 9: Section – (9.2 and 9.5) Permutations and Combinations • Chapter 9: Section – 9.6 Combinations with Repetition Allowed
#9 **Assignments due:** **June 06, 2023**	• Chapter 1: Section – 1.4 The Language of Graphs • Chapter 4: Section – 4.9 Application: The Handshake Theorem • Chapter 10: Section – 10.1 Connectedness: Trails, Paths and Circuits
#10 **Assignments due: June 09, 2023 (no late submission allowed)**	• Chapter 10: Section – 10.6 Spanning Trees and a Shortest Path Algorithm
#Final Week **Final Exam due:** **June 15, 2023**	**Final Exam: 06/11/2023 – 06/15/2023 (covers Week 3 – Week 10)**