CS 225_400: Discrete Structures in CS (Winter 2022)

<u>Abbreviated</u> <u>Weekly Schedule</u>ł:

To summarize, the assignments, initial and final posts of bi-weekly discussions are due by 11:59 pm (Pacific Time) on Mondays, bi-weekly quizzes on materials covered in the prior weeks are due by 11:59 pm (Pacific Time) on Wednesdays, reply posts of discussions are due by 11:59 pm (Pacific Time) on Thursdays (except week 10). 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: **January 10, 2022** Syllabus Quiz due: **January 12, 2022**	• Chapter 2: Section – 2.1 Logical Form and Logical Equivalence • Chapter 2: Section – 2.2 Conditional Statements
#2 Assignments due: **January 17, 2022** 7 Ubj Ug˙X]gW gg]cb˙due f]b]h]U˙dcgh: **January 17, 2022** **Canvas discussion due (reply post):** **January 20, 2022** **Canvas discussion due (final post):** **January 24, 2022**	• Chapter 3: Section -(3.1 to 3.2) Predicates and Quantified Statements • Chapter 5: Section - (5.1 to 5.2) Sequences and Summations
#3 5 gg][ba Ybłg˙Xi Y. **January 24, 2022** E i]n˙1˙Xi Y. **January 26, 2022**	• 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: **January 31, 2022** 7 Ubj Ug˙X]gW gg]cb˙due f]b]h]U˙dcgh: **January 31, 2022** **Canvas discussion due (reply post):** **February 03, 2022** **Canvas discussion due (final post):** **February 07, 2022**	• 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 **5 gg][ba Ybǐg˙Xi Y.** **February 07, 2022** **E i]n˙2˙Xi Y.** **February 09, 2022**	• Chapter 5: Section - (5.2 to 5.3) Mathematical Induction: Weak Induction • Chapter 5: Section - 5.4 Strong Mathematical Induction
#6 Assignments due: **February 14, 2022** **Canvas discussion due (initial post):** **February 14, 2022** **Canvas discussion due (reply post):** **February 17, 2022** **Canvas discussion due (final post):** **February 21, 2022**	• Chapter 5: (Section - 5.6, 5.7, and 5.9) Recursive Definitions
#7 Assignments due: **February 21, 2022** **Quiz 3 due:** **February 23, 2022**	• 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: **February 28, 2022** **Canvas discussion due (initial post):** **February 28, 2022** **Canvas discussion due (reply post):** **March 03, 2022** **Canvas discussion due (final post):** **March 07, 2022**	• Chapter 9: Section- (9.2 and 9.5) Permutations and Combinations • Chapter 9: Section - 9.6 Combinations with Repetition Allowed
#9 Assignments due: **March 07, 2022** **Quiz 4 due:** **March 09, 2022**	• 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: **March 11, 2022**(no late submission allowed) Canvas discussion due (initial post): **March 07, 2022** Canvas discussion due (reply post): **March 10, 2022** Canvas discussion due (final post): **March 14, 2022**	• Chapter 10: Section -10.6 Spanning Trees and a Shortest Path Algorithm
#Final Week **Final Exam due:** **March 17, 2022**	**Final Exam: 03/13/2022 – 03/17/2022 (covers Week 3 – Week 10)**