CS 225_400: Discrete Structures in CS (Fall 2021)

Abbreviated Weekly Schedule*:

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. 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: September 27, 2021 Syllabus Quiz due: September 29, 2021	• Chapter 2: Section – 2.1 Logical Form and Logical Equivalence • Chapter 2: Section – 2.2 Conditional Statements
#2 Assignments due: October 04, 2021 Canvas discussion due (initial post): October 04, 2021 Canvas discussion due (reply post): October 07, 2021 Canvas discussion due (final post): October 11, 2021	• 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: October 11, 2021 Quiz 1 due: October 13, 2021	• 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: October 18, 2021 Canvas discussion due (initial post): October 18, 2021 Canvas discussion due (reply post): October 21, 2021 Canvas discussion due (final post): October 25, 2021	• 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:** **October 25, 2021** **Quiz 2 due:** **October 27, 2021**	• Chapter 5: Section - (5.2 to 5.3) Mathematical Induction: Weak Induction • Chapter 5: Section - 5.4 Strong Mathematical Induction
#6 **Assignments due:** **November 01, 2021** **Canvas discussion due (initial post):** **November 01, 2021** **Canvas discussion due (reply post):** **November 04, 2021** **Canvas discussion due (final post):** **November 08, 2021**	• Chapter 5: (Section - 5.6, 5.7, and 5.9) Recursive Definitions
#7 **Assignments due:** **November 08, 2021** **Quiz 3 due:** **November 10, 2021**	• 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:** **November 15, 2021** **Canvas discussion due (initial post):** **November 15, 2021** **Canvas discussion due (reply post):** **November 18, 2021** **Canvas discussion due (final post):** **November 22, 2021**	• Chapter 9: Section- (9.2 and 9.5) Permutations and Combinations • Chapter 9: Section - 9.6 Combinations with Repetition Allowed
#9 **Assignments due:** **November 22, 2021** **Quiz 4 due:** **November 24, 2021**	• 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:** **November 29, 2021 (no late submission allowed)** **Canvas discussion due (initial post):** **November 29, 2021** **Canvas discussion due (reply post):** **December 02, 2021** **Canvas discussion due (final post): December 06, 2021**	• Chapter 10: Section -10.6 Spanning Trees and a Shortest Path Algorithm
#Final Week **Final Exam due:** **December 09, 2021**	**Final Exam:12/05/2021 – 12/09/2021 (covers Week 3 – Week 10)**