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

Abbreviated Weekly Scheduleℓ:

Hc˙gi a a Uf]nYž˙ḣ Y˙Ugg][ba Ybḣg,]b]ḣ]U˙ and final dcgḣg˙cZ X]gW˙gg]cbg˙UfY˙Xi Y˙Vm̀ %‰) - ˙da ˙fDGHḢ cb˙ Mondays,˙ei]nnYg cb˙a UḣYf]U˙g˙Wc˙j YfYX˙]b˙ḣ Y˙df]cf˙k YY_g˙UfY˙ Xi Y˙Vm̀%‰) - ˙da ˙fDGHḢ cb˙K YXbYgXUḥg, reply posts of discussions are due by 11:59 pm (PST) on Thursdays(**except week 7&8**)"D˙YUgY˙a U_Ygi fY˙ḣ Uḣ mci ˙\ Uj Y˙ gi Va]ḣḣYX˙ḣ Y˙Ugg][ba Ybḣgž X]gW˙gg]cb˙fYgdcbgYgž UbX˙ei]nnYg˙j]U˙7 Ubj Ug"ℓḢ]g˙ gẄ YXi `Y˙]g˙gi V^YWḣ hc˙ Ẅ Ub[Y˙7 ḣ Ub[Ygž]Z bYẄ YggUfmž k]`` VY˙i dXUḣYX˙ \ YfY˙UbX˙ dcgḣYX˙ j]U˙7 Ubj Ug#Ed Discussion˙Ubbci bẀa Ybḣg"

Week	Course Topics (followed the 5th edition of the required textbook)
#1 Assignments due: **June 28, 2021** Syllabus Quiz due: **June 30, &$&1**	• Chapter 2: Section – 2.1 Logical Form and Logical Equivalence • Chapter 2: Section – 2.2 Conditional Statements • Chapter 3: Section – (3.1 to 3.2) Predicates and Quantified Statements
#2 Assignments due: **July 05, 2021** 7 Ubj Ug˙X]gW˙gg]cb˙due f]b]ḣ]U˙dcgḣ: **July 05, 2021** Canvas discussion due (reply post): **July 08, 2021** Canvas discussion due (final post): **July 12, 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
#3 5 gg][ba Ybḣg˙Xi Y. **July 12, 2021** Ei]n˙1˙Xi Y. **July 14, 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 • Chapter 5 : Section – (5.1 and 5.2) Sequences and Summations
#4 Assignments due: **July 19, 2021** 7 Ubj Ug˙X]gW˙gg]cb˙due f]b]ḣ]U˙dcgḣ: **July 19, 2021** Canvas discussion due (reply post): **July 22, 2021** Canvas discussion due (final post): **July 26, 2021**	• Chapter 5: Section – (5.2 to 5.3) Weak Mathematical Induction • Chapter 5: Section – 5.4 Strong Mathematical Induction

Week	Course Topics (followed the 5th edition of the required textbook)
#5 5 gg]] ba Yb1g¨Xi Y. **July 26, 2021** E i]n¨2¨Xi Y. **July 28, 2021**	• Chapter 5: (Section – 5.6, 5.7, and 5.9) Recursive Definitions • Chapter 9: Section – (9.2 to 9.3) Basic Counting Rules: Multiplication and Addition Rule • Chapter 9: Section – 9.4 The Pigeonhole Principle
#6 Assignments due: **August 02, 2021** 7 Ubj Ug¨X]gW gg]cb¨due f]b]h]U¨dcgh: **August 02, 2021** Canvas discussion due (reply post): **August 05, 2021** Canvas discussion due (final post): **August 09, 2021**	• Chapter 9: Section – (9.2 and 9.5) Permutations and Combinations • Chapter 9: Section – 9.6 Combinations with Repetition Allowed
#7 Assignments due: **August 09, 2021 <u>(no late submission will be graded)</u>** Canvas discussion due (initial post): **August 09, 2021** Canvas discussion due (reply post): **August 11, 2021** Canvas discussion due (final post): **August 13, 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 • Chapter 10: Section -10.6 Spanning Trees and a Shortest Path Algorithm
#Final Week **Final Quiz due: August 15, 2021**	**Final Quiz : 08/11/2021 – 08/15/2021 (Week 2 – Week 7)**