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

Abbreviated Weekly Scheduleℓ:

Hc˙gi a a Uf]nYž ﬁ\ Y˙Ugg][ba Ybﬁg,]b]ﬁ]U˙ and final dcgﬁg˙cZ X]gW﬈ gg]cbg˙UfY˙Xi Y˙Vmﬁ%%) - ˙da ˙fDGHﬁ˙cb˙ Mondays,˙ ei]nnYg cb˙a UﬁYf]U˙g˙Wﬁj YfYX˙]b˙ﬁ\ Y˙df]cf˙k YY_g˙UfY˙Xi Y˙Vmﬁ%%) - ˙da ˙fDGHﬁ˙cb˙K YXbYgXUmg, reply posts of discussions are due by 11:59 pm (PST) on Thursdays(except week 10)"D˙YUgY˙a U_Y˙gi fY˙ﬁ\ Uﬁmci ˙\ Uj Y˙gi Va]ﬁﬁYX˙ﬁ\ Y˙Ugg][ba Ybﬁž X]gW﬈ gg]cb˙fYgdcbgYgž UbX˙ei]nnYg˙j]U˙7 UbjUg"ﬂH﬈]g˙gW﬈ YXi `Y]g˙gi V﬈YWﬁ˙ﬁc˙ W﬈ Ub[Y"˙7 \ Ub[Ygž]Z bYW﬈YggUfmž k]``VY˙i dXUﬁYX˙\ YfY˙UbX˙dcgﬁYX˙j]U˙7 UbjUg#Ed Discussion˙Ubbci bWﬁa Ybﬁg"

Week	Course Topics (followed the 5th edition of the required textbook)
#1 Assignments due: April 05, 2021 Syllabus Quiz due: April 07, 8$&1	• Chapter 2: Section – 2.1 Logical Form and Logical Equivalence • Chapter 2: Section – 2.2 Conditional Statements
#2 Assignments due: April 12, 2021 7 UbjUg˙X]gW﬈ gg]cb˙due f]b]ﬁ]U˙dcgﬁ: April 12, 2021 Canvas discussion due (reply post): April 15, 2021 Canvas discussion due (final post): April 19, 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 5 gg][ba Ybﬁg˙Xi Y. April 19, 2021 E i]n˙1˙Xi Y. April 21, 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: April 26 2021 7 UbjUg˙X]gW﬈ gg]cb˙due f]b]ﬁ]U˙dcgﬁ: April 26, 2021 Canvas discussion due (reply post): April 29, 2021 Canvas discussion due (final post): May 03, 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 5 gg]][ba Ybhg˙Xi Y. **May 03, 2021** E i]n˙2˙Xi Y. **May 05, 2021**	• Chapter 5: Section - (5.2 to 5.3) Mathematical Induction: Weak Induction • Chapter 5: Section - 5.4 Strong Mathematical Induction
#6 Assignments due: **May 10, 2021** 7 Ubj Ug˙X]gW gg]cb˙due f]b]H]U˙dcgH: **May 10, 2021** Canvas discussion due (reply post): **May 13, 2021** Canvas discussion due (final post): **May 17, 2021**	• Chapter 5: (Section - 5.6, 5.7, and 5.9) Recursive Definitions
#7 Assignments due: **May 17, 2021** Quiz 3 due: **May 19, 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: **May 24, 2021** 7 Ubj Ug˙X]gW gg]cb˙due f]b]H]U˙dcgH: **May 24, 2021** Canvas discussion due (reply post): **May 27, 2021** Canvas discussion due (final post): **May 31, 2021**	• Chapter 9: Section- (9.2 and 9.5) Permutations and Combinations • Chapter 9: Section - 9.6 Combinations with Repetition Allowed
#9 Assignments due: **May 31, 2021** Quiz 4 due: **June 02, 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 **Assignment due:** **June 04, 2021** **Canvas discussion due (initial post):** **June 02, 2021** **Canvas discussion due (reply post):** **June 04, 2021** **Canvas discussion due (final post): June 07, 2021**	• Chapter 10: Section -10.6 Spanning Trees and a Shortest Path Algorithm
#Final Week Final Quiz due: **June 10, 2021**	**Final Quiz :06/06/2021 – 06/10/2021 (Week 3 – Week 10)**