# CS 225_400: Discrete Structures in CS (Winter 2021)

## Abbreviated Weekly Scheduleᴸ:

Hc˙gi a a Uf]nYžℕ Y˙Ugg][ ba Ybℕg˙UbX˙]b]ℕjU˙dcghg˙cZX]gW˙gg]cbg˙UfY˙Xi Y˙Vmĭ%%) - ˙da ˙fDGHℒcb˙Sundays UbX˙ℕ Y˙Z]bU˙dcghg˙cZX]gW˙gg]cbg˙UbX˙ei ]nnYg˙cb˙a UℕYf]U˙g˙Wℓj YfYX˙]b˙ℕ Y˙df]cf˙k YY_g˙UfY˙Xi Y˙Vmĭ%%) - ˙da ˙fDGHℒcb˙K YXbYgXUℕg **(except week 10)**"D˙YUgY˙a U_Y˙gi f Y˙ℕ Uℕmci ˙\ Uj Y˙gi Va ]ℕℕYX˙ℕ Y˙Ugg][ ba Ybℕgž X]gW˙gg]cb˙fYgdcbgYgž UbX˙ei ]nnYg˙j ]U˙7 Ubj Ug"

 łH˙]g˙gW˙ YXi ˙Y˙g˙gi V^YWℕhc˙W˙ Ub[ Y"7\ Ub[ Ygž]ZbYWYggUfmž k ]``VY˙i dXUℕYX˙\ YfY˙UbX˙dcghYX˙j ]U˙7 Ubj Ug#Đ]UnnU˙Ubbci bWa Ybℕg"

| Week | Course Topics (followed the 5th edition of the required textbook) |
|---|---|
| **#1**<br>Assignments due:<br>**January 10, 2021**<br>Syllabus Quiz due:<br>**March 12, &$&1** | • Chapter 2: Section – 2.1 Logical Form and Logical Equivalence<br>• Chapter 2: Section – 2.2 Conditional Statements |
| **#2**<br>Assignments due:<br>**January 17, 2021**<br>7 Ubj Ug˙X]gW˙gg]cb˙due f]b]ℕjU˙dcghℒ:<br>**January 17, 2021**<br>Canvas discussion due (final post):<br>**January 20, 2021** | • Chapter 3: Section -(3.1 to 3.2) Predicates and Quantified Statements<br>• Chapter 5: Section - (5.1 to 5.2) Sequences and Summations |
| **#3**<br>5 gg][ ba Ybℕg˙Xi Y.<br>**January 24, 2021**<br>E i ]n˙1˙Xi Y.<br>**January 27, 2021** | • Chapter 4: Section – (4.1 to 4.5) Direct Proof and Counterexample<br>• Chapter 4: Section – 4.7 Indirect Argument: Contraposition<br>• Chapter 4: Section – (4.7 to 4.8) Indirect Argument: Contradiction and Two Classical Theorems |
| **#4**<br>Assignments due:<br>**January 31, 2021**<br>Canvas discussion due (initial post):<br>**January 31, 2021**<br>Canvas discussion due (final post):<br>**February 03, 2021** | • Chapter 6: Section - 6.1 Set Theory: Definitions and Element Method of Proof<br>• 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**<br>5 gg][ ba Ybłg˙Xi Y.<br><span style="color:red">**February 07, 2021**</span><br>E i ]n˙2˙Xi Y.<br><span style="color:red">**February 10, 2021**</span> | • Chapter 5: Section - (5.2 to 5.3) Mathematical Induction: Weak Induction<br>• Chapter 5: Section - 5.4 Strong Mathematical Induction |
| **#6**<br>Assignments due:<br><span style="color:red">**February 14, 2021**</span><br>Canvas discussion due (initial post):<br><span style="color:red">**February 14, 2021**</span><br>Canvas discussion due (final post):<br><span style="color:red">**February 17, 2021**</span> | • Chapter 5: (Section - 5.6, 5.7, and 5.9) Recursive Definitions |
| **#7**<br>Assignments due:<br><span style="color:red">**February 21, 2021**</span><br>Quiz 3  due:<br><span style="color:red">**February 24, 2021**</span> | • Chapter 9: Section-(9.2 to 9.3) Basic Counting Rules: Multiplication and Addition Rule<br>• Chapter 9: Section-9.4 The Pigeonhole Principle |
| **#8**<br>Assignments due:<br><span style="color:red">**February 28, 2021**</span><br>Canvas Discussion due (initial post):<br><span style="color:red">**February 28, 2021**</span><br>Canvas discussion due (final post):<br><span style="color:red">**March 03, 2021**</span> | • Chapter 9: Section- (9.2 and 9.5) Permutations and Combinations<br>• Chapter 9: Section - 9.6 Combinations with Repetition Allowed |
| **#9**<br>Assignments due:<br><span style="color:red">**March 07, 2021**</span><br>Quiz 4 due:<br><span style="color:red">**March 10, 2021**</span> | • Chapter 1: Section-1.4 The Language of Graphs<br>• Chapter 4: Section-4.9 Application: The Handshake Theorem<br>• Chapter 10: Section-10.1 Connectedness: Trails, Paths and Circuits |
| **#10**<br>Assignment due:<br><span style="color:red">**March 12, 2021 (No late submission is allowed)**</span><br>Canvas Discussion due (initial post):<br><span style="color:red">**March 10, 2021**</span><br>Canvas discussion due (final post):<br><span style="color:red">**March 12, 2021**</span> | • Chapter 10: Section -10.6 Spanning Trees and<br><br>     a Shortest Path Algorithm |
| **#Final Week**<br>Final Quiz due:<br><span style="color:red">**March 17, 2021**</span> | <span style="color:blue">**Final Quiz :03/13/2021 –  03/17/2021 (Week 3 – Week 10)**</span> |