

## CS 151: Mathematical Foundations of Computing Course Schedule Spring 2018

| Week | Day | Date   | Торіс                                 | Chapter        | Homework                   | Quiz           | Lab            |
|------|-----|--------|---------------------------------------|----------------|----------------------------|----------------|----------------|
|      | М   | Jan 15 |                                       | Martin L       | uther King Jr. Day         |                |                |
| 1    | W   | Jan 17 | Logic: Introduction to Logic          | 1.1            |                            |                |                |
|      | F   | Jan 19 | Logic: Propositional Logic            | 1.2, 1.3       |                            |                | L0 (Logic)     |
| 2    | M   | Jan 22 | Logic: Propositional Logic            | 1.4, 1.5       |                            |                | L0 (Logic)     |
|      | W   | Jan 24 | Logic: Predicate Logic                | 1.6, 1.7       |                            | Q0 (Logic)     |                |
|      | F   | Jan 26 | Logic: Predicate Logic                | 1.8, 1.9, 1.10 |                            |                | L1 (Logic)     |
| 3    | M   | Jan 29 | Logic: Logical Reasoning              | 1.11, 1.12     |                            |                | L1 (Logic)     |
|      | W   | Jan 31 | Logic: Logical Reasoning              | 1.13           |                            | Q1 (Logic)     |                |
|      | F   | Feb 02 | Logic: Logical Reasoning              |                | HW1 (Logic)                |                | L2 (Logic)     |
| 4    | M   | Feb 05 | Proofs: Direct Proofs                 | 2.1, 2.2       |                            |                | L2 (Logic)     |
|      | W   | Feb 07 | Proofs: Proof by Contrapositive       | 2.3            |                            | Q2 (Logic)     |                |
|      | F   | Feb 09 | Proofs: Proof by Contradiction        | 2.4            | HW2 (Logic)                |                | L3 (Proofs)    |
|      | M   | Feb 12 | Proofs: More Proofs                   | 2.5            |                            |                | L3 (Proofs)    |
| 5    | W   | Feb 14 | Sets: Introduction to Sets            | 3.1, 3.2       |                            |                |                |
|      | F   | Feb 16 | Sets: Set Operations                  | 3.3, 3.4       | HW3 (Proofs)               |                | L4 (Proofs)    |
| 6    | M   | Feb 19 | Sets: More Sets                       | 3.5, 3.6, 3.7  |                            |                | L4 (Proofs)    |
|      | W   | Feb 21 | Exam 1 Review                         |                |                            | Q3 (Exam 1)    |                |
|      | F   | Feb 23 | Exam 1 (Logic, Proofs)                |                |                            |                | No Lab         |
| 7    | M   | Feb 26 | Relations: Introduction to Relations  | 4.1, 4.2, 4.4  |                            |                | L5 (Sets)      |
|      | W   | Feb 28 | Relations: Directed Graphs            | 4.3, 4.5, 4.6  |                            | Q4 (Sets)      |                |
|      | F   | Mar 02 | Relations: More Relations             | 4.7, 4.8, 4.9  |                            |                | L5 (Sets)      |
| 8    | M   | Mar 05 | Functions: Introduction to Functions  | 5.1, 5.2       |                            |                | L6 (Relations) |
|      | W   | Mar 07 | Functions: Properties of Functions    | 5.3, 5.4       |                            | Q5 (Relations) |                |
|      | F   | Mar 09 | Functions: More Functions             | 5.5, 5.6       | HW4 (Sets, Relations)      |                | L6 (Relations) |
| 9    | M   | Mar 12 | Induction: Sequences                  | 8.1, 8.2, 8.3  |                            |                | L7 (Functions) |
|      | W   | Mar 14 | Induction: Induction                  | 8.4            |                            | Q6 (Functions) |                |
|      | F   | Mar 16 | Induction: Induction                  | 8.5            | HW5 (Relations, Functions) |                | L7 (Functions) |
| 10   | M   | Mar 19 | Exam 2 Review                         |                |                            | Q7 (Exam 2)    | L8 (Induction) |
|      | W   | Mar 21 | Exam 2 (Sets, Relations, Functions, S |                |                            |                |                |
|      | F   | Mar 23 | Induction: Strong Induction           | 8.6            |                            |                | L8 (Induction) |



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|      | М   | Mar 26 |  |                    |                   |                   |                   |  |  |
| -    | W   | Mar 28 | Spring Break                             |                    |                   |                   |                   |  |  |
|      | F   | Mar 30 |  |                    |                   |                   |                   |  |  |
| 11   | M   | Apr 02 | Induction: More Induction                |                    |                   |                   | L9 (Induction)    |  |  |
|      | W   | Apr 04 | Induction: Structural Induction          | 8.8, 8.9           |                   |                   |                   |  |  |
|      | F   | Apr 06 | Induction: Recursion                     | 8.10, 8.11         | HW6 (Induction)   |                   | L9 (Induction)    |  |  |
| 12   | M   | Apr 09 | Counting: Introduction to Counting       | 10.1, 10.3         |                   |                   | L10 (Induction)   |  |  |
|      | W   | Apr 11 | Counting: Permutations and Combinations  | 10.4, 10.5, 10.6   |                   | Q8 (Counting)     |                   |  |  |
|      | F   | Apr 13 | Counting: Permutations and Combinations  | 10.8, 10.9         | HW7 (Induction)   |                   | L10 (Induction)   |  |  |
| 13   | M   | Apr 16 | Counting: More Counting                  | 10.7, 10.11, 10.12 |                   |                   | L11 (Counting)    |  |  |
|      | W   | Apr 18 | Counting: Advanced Counting              | 11.2, 11.3         |                   | Q9 (Counting)     |                   |  |  |
|      | F   | Apr 20 | Probability: Introduction to Probability | 12.1, 12.2         | HW8 (Counting)    |                   | L11 (Counting)    |  |  |
| 14   | M   | Apr 23 | Exam 3 Review                            |                    |                   | Q10 (Exam 3)      | L12 (Counting)    |  |  |
|      | W   | Apr 25 | Exam 3 (Induction, Counting)             |                    |                   |                   |                   |  |  |
|      | F   | Apr 27 | Probability: Conditional Probability     | 12.3, 12.4         |                   |                   | L12 (Counting)    |  |  |
| 15   | М   | Apr 30 | Probability: Random Variables            | 12.5, 12.6, 12.7   |                   |                   | L13 (Probability) |  |  |
|      | W   | May 02 | Probability: More Probability            | 12.8               |                   | Q11 (Probability) |                   |  |  |
|      | F   | May 04 | Final Exam Review                        |                    | HW9 (Probability) |                   | L13 (Probability) |  |  |
| 16   | TBD | TBD    | Final Exam                               |                    |                   |                   |                   |  |  |

**NOTE:** The course schedule is subject to change.

Last Modified: February 12, 2018