There will be approximately 12 homework assignments (20% of grade).

1. **Week one**

8/23, Mon. Introduction to Course and material

8/25, Wed. §2.1 Sets and operations on sets

8/27, Fri. §2.2 More sets and operations on sets

2. **Week two**

8/30, Mon. §2.3 Relations on sets

9/1, Wed. §2.4 Partitions

9/3, Fri. §2.5 Partial Orders. Hasse Diagrams.

3. **Week three**

9/6, Mon. No class, Labor Day.

9/8, Wed. §2.5 Posets.

9/10, Fri. §3.1 Functions: Domain, range, target.

4. **Week four**

9/13, Mon. §3.2 Functions: one-to-one, onto, composition, inverse.

9/15, Wed. §4.1 Division algorithm.

9/17, Fri. §4.2 GCD. Euclidean algorithm.
5. Week five

9/20, Mon. §Review.

9/22, Wed. §Midterm I (20% of grade).

9/24, Fri. §4.2 Postage problems.

6. Week six

9/27, Mon. §4.4 Congruence. Modular arithmetic.

9/29, Wed. §4.5 Universal Product Codes.

10/1, Fri. §5.1 More Modular Arithmetic. Mathematical induction.

7. Week seven


10/6, Wed. §5.2 Recursively defined sequences (recurrence relations).

10/8, Fri. §5.2 More Chinese Remainder Theorem. More recurrence relations.

8. Week eight

10/11, Mon. §5.3 Strong induction.

10/13, Wed. §5.3 Characteristic polynomials.

10/15, Fri. No class, Fall Break.

9. Week nine

10/18, Mon. §6.1 Inhomogeneous recurrence relations. Counting.


10/22, Fri. §6.3 The pigeon hole principle.

10. Week ten

10/25, Mon. §7.1 Permutations.

10/27, Wed. §7.2 Combinations.

10/29, Fri. §7.3 Repetitions.
11. Week eleven

11/1, Mon. §Review.
11/3, Wed. §Midterm II (25% of grade).
11/5, Fri. §

12. Week twelve

11/8, Mon. §
11/10, Wed. §
11/12, Fri. §

13. Week thirteen

11/15, Mon. §
11/17, Wed. §
11/19, Fri. §

14. Week fourteen

11/22, Mon. §
11/24, Wed. §
11/26, Fri. No class, Thanksgiving.

15. Week fifteen

11/29, Mon. §
12/1, Wed. §
12/3, Fri. §

16. Week sixteen

12/6, Mon. §
12/8, Wed. §
12/10, Fri. §
Final, 12/17

Comprehensive final, Friday, December 17, 10:00–12:00 (35% of grade).