MATH 302 Discrete Mathematics

Tentative schedule

Fall 2020

This tentative schedule might be revised during the semester without notification. See the course website for the up-to-date schedule.

The purpose of this schedule is to provide information about what sections of the textbook are expected to be covered in this course and when they are expected to be covered in the lectures.

It will be very helpful for you to absorb the materials during the lectures if you read the textbook in advance.

- Week 1 (Aug 20).

  3.1 introduction to algorithms

- Week 2 (Aug 25, 27)

  3.2 growth rate of functions

  1.1 propositional logic

  Assignment 1 due Aug 30

- Week 3 (Sep 1, 3)

  1.3 propositional equivalence

  1.4 predicates and quantifiers

  1.5 nested quantifiers

  Quiz 1 is during Aug 31-Sep 2

  Assignment 2 due

- Week 4 (Sep 8, 10)

  1.5 nested quantifiers

  1.6 rules of inference

  Quiz 2

  Assignment 3 due

- Week 5 (Sep 15, 17)

  1.7 introduction to proofs

  2.1 sets

Quiz 3

Assignment 4 due

- Week 6 (Sep 22, 24)

  2.2 set operations

  2.3 functions

  Quiz 4

  Assignment 5 due

  Quiz 5

- Week 7 (Sep 29, Oct 1)

  2.4 sequences and summations

  First Midterm is on Sep 29

  Assignment 6 due

- Week 8 (Oct 6, 8)

  5.1 mathematical induction

  5.2 strong induction and well-ordering

  5.3 recursive definitions and sequences

  Quiz 6

  Assignment 7 due

- Week 9 (Oct 13, 15)

  6.1 basic of counting

  6.3 permutations and combinations

  Quiz 7

  Assignment 8 due

- Week 10 (Oct 20, 22)

  6.5 generalized permutations and combinations

  6.4 binomial coefficients and identities

  8.5 inclusion-exclusion

  Quiz 8

  Assignment 9 due

- Week 11 (Oct 27, 29)

  8.5 inclusion-exclusion

  8.6 applications of inclusion-exclusion

  8.1 recurrence relations

Quiz 9

Assignment 10 due

- Week 12 (Nov 3, 5)

  Second Midterm is on Nov 5

  8.2 solving linear recurrence relations

- Week 13 (Nov 10, 12)

  8.2 solving linear recurrence relations

  8.3 divide and conquer algorithms (including Master Theorem)

  Assignment 11 due

  Quiz 10

- Week 14 (Nov 17, 19)

  9.1 relations and their properties

  9.5 equivalence relations

  Assignment 12 due

  Quiz 11

- Week 15 (Nov 24)

  9.6 partial orderings

  (**Assignment 13 is for self-practice, has no due date and does not contribute points for computing semester grades.**)