MATH 302 Discrete Mathematics

Tentative schedule

Spring 2019

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 (Jan 14, 16, 18).

  3.1 introduction to algorithms

  3.2 growth rate of functions

- Week 2 (Jan 21, 23, 25)

  1.1 propositional logic

  1.3 propositional equivalence

  Assignment 1 due Jan 23

  Quiz 1 is on Jan 25

  Jan 21 is Martin Luther King, Jr. Day, no class

- Week 3 (Jan 28, 30, Feb 1)

  1.4 predicates and quantifiers

  1.5 nested quantifiers

  Assignment 2 due

  Quiz 2

- Week 4 (Feb 4, 6, 8)

  1.6 rules of inference

  1.7 introduction to proofs

  Assignment 3 due

  Quiz 3

- Week 5 (Feb 11, 13, 15)

  2.1 sets

  2.2 set operations

  Assignment 4 due

  Quiz 4

- Week 6 (Feb 18, 20, 22)

  2.3 functions

  Brief review for the first midterm

  Assignment 5 due

  Quiz 5

  First Midterm is on Feb 22

- Week 7 (Feb 25, 27, Mar 1)

  2.4 sequences and summations

  5.1 mathematical induction

  Assignment 6 due

- Week 8 (Mar 4, 6, 8)

  5.2 strong induction and well-ordering

  5.3 recursive definitions and sequences

  6.1 basic of counting

  Assignment 7 due

  Quiz 6

- **March 11-15 Spring break**

- Week 9 (Mar 18, 20, 22)

  6.3 permutations and combinations

  6.5 generalized permutations and combinations

  Assignment 8 due

  Quiz 7

- Week 10 (Mar 25, 27, 29)

  6.4 binomial coefficients and identities

  8.5 inclusion-exclusion

  Assignment 9 due

  Quiz 8

- Week 11 (Apr 1, 3, 5)

  8.6 applications of inclusion-exclusion

  8.1 recurrence relations

  Assignment 10 due

  Quiz 9

  Second Midterm is on Apr 3

- Week 12 (Apr 8, 10, 12)

  8.2 solving linear recurrence relations

- Week 13 (Apr 15, 17, 19)

  Assignment 11 due

  Quiz 10

  8.3 divide and conquer algorithms (including Master Theorem)

  Apr 19 is Reading day, no class

- Week 14 (Apr 22, 24, 26)

  9.1 relations and their properties

  9.5 equivalence relations

  Assignment 12 due

  Quiz 11

- Week 15 (Apr 29, 30)

  9.6 partial orderings

  Apr 30 is redefined day, counted as Friday

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