

# MATH 302 Discrete Mathematics

Tentative schedule

Fall 2018

**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 28, 30).
  - 3.1 introduction to algorithms
  - 3.2 growth rate of functions
- Week 2 (Sep 4, 6)
  - 1.1 propositional logic
  - 1.3 propositional equivalence
  - 1.4 predicates and quantifiers
  - Assignment 1 due Sep 4**
  - Quiz 1 is on Sep 6**
- Week 3 (Sep 11, 13)
  - 1.4 predicates and quantifiers
  - 1.5 nested quantifiers
  - 1.6 rules of inference
  - Assignment 2 due**
  - Quiz 2**
- Week 4 (Sep 18, 20)
  - 1.6 rules of inference
  - 1.7 introduction to proofs
  - Assignment 3 due**
  - Quiz 3**

- Week 5 (Sep 25, 27)
  - 2.1 sets
  - 2.2 set operations
  - Assignment 4 due**
  - Quiz 4**
- Week 6 (Oct 2, 4)
  - 2.3 functions
  - Assignment 5 due**
  - Quiz 5**
  - First Midterm is on Oct 4**
- Week 7 (Oct 9, 11)
  - 2.4 sequences and summations
  - 5.1 mathematical induction
  - Assignment 6 due**
- Week 8 (Oct 16, 18)
  - 5.2 strong induction and well-ordering
  - 5.3 recursive definitions and sequences
  - 6.1 basic of counting
  - Assignment 7 due**
  - Quiz 6**
- Week 9 (Oct 23, 25)
  - 6.3 permutations and combinations
  - 6.5 generalized permutations and combinations
  - Assignment 8 due**
  - Quiz 7**
- Week 10 (Oct 30, Nov 1)
  - 6.4 binomial coefficients and identities
  - 8.5 inclusion-exclusion
  - Assignment 9 due**
  - Quiz 8**
- Week 11 (Nov 6, 8)
  - 8.6 applications of inclusion-exclusion
  - 8.1 recurrence relations

8.2 solving linear recurrence relations

**Assignment 10 due**

**Quiz 9**

- Week 12 (Nov 13, 15)

**Second Midterm is on Nov 13**

8.2 solving linear recurrence relations

- Week 13 (Nov 20, 22)

**Assignment 11 due**

**Quiz 10**

8.3 divide and conquer algorithms (including Master Theorem)

**Nov 22 is Thanksgiving**

- Week 14 (Nov 27, 29)

9.1 relations and their properties

9.5 equivalence relations

**Assignment 12 due**

**Quiz 11**

- Week 15 (Dec 4)

9.6 partial orderings

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