

Course Syllabus Fall 2022

CS 2305.002 Discrete Mathematics for Computing I

Instructor:

Grader:

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Office Hours: 2:45 – 3:45pm MW + by appointment

Course Description (Catalog):

[CS 2305](#) ([MATH 2305](#))

Discrete Mathematics for Computing I (3 semester credit hours)

Principles of counting. Boolean operations. Logic and proof methods. Recurrence relations. Sets, relations, functions. Elementary graph theory. Elementary number theory. Prerequisite: Score of at least 75% in ALEKS or [MATH 2312](#) with a grade of C or better. (Same as [CE 2305](#)) (3-0) S

Course Objectives

Upon completion of this course, students will have:

- (a) Ability to use and apply basic logic
- (b) Ability to use and apply basic definitions and properties of sets, functions, relations.
- (c) Ability to understand what an algorithm is, algorithmic complexity;
- (d) Ability to understand and construct proofs including proofs by induction;
- (e) Ability to use basic counting techniques
- (f) Ability to understand and use basic number theory
- (g) Ability to understand and use basic graph theory.

Course Information - Textbook:

“Discrete Mathematics and its Applications” with MGH Connect.
Kenneth H. Rosen, 8thed., McGraw Hill.
MGH Connect is required (Homework will be mostly from MGH Connect)

Material to be covered:

Chapters 1, 2.1-2.3, 3.1-3.2, 4.1-4.2, 5.1-5.2, 6.1-6.3, 7.1, 9.1-9.3, 10.1-10.5, 11.1-11.3

Important Dates:

| | |
|-----------------------------|-------------------|
| Last Day to Drop without W: | September 7, 2022 |
| Last Day to Drop (W): | October 3, 2022 |
| Last Day to Drop Late (WL): | November 8, 2022 |
| Last Day of Classes | December 8, 2022 |
| Exam 1 | October 12, 2022 |
| Exam 2 | December 7, 2022 |

University Closings:

| | |
|-------------------------|----------------------|
| Labor Day | September 5, 2022 |
| Fall Break/Thanksgiving | November 21-27, 2022 |

Grading Policy

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|------------|----------|
| Attendance | 10% |
| Homework | 30% |
| 2 exams | 30% each |

Grading Scale:

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|-------|----|-------|---|--------|----|
| 0-59 | F | | | | |
| 60-62 | D- | 63-66 | D | 67-69 | D+ |
| 70-72 | C- | 73-76 | C | 77-79 | C+ |
| 80-82 | B- | 83-86 | B | 87-89 | B+ |
| 90-92 | A- | 93-96 | A | 97-100 | A+ |