

SYLLABUS

Instructor: Dr. Kejian Shi
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Office Hour: Thursday, 11:00am-12:00noon virtual office hour via zoom on canvas

Prerequisites: MATH 32 or MATH 32H (with a grade of C or better) or equivalent, and CIS 22A or CIS 35A (with a grade of C or better) or equivalent.

Textbook: *Discrete Mathematics*, Brief Edition, by Susanna S. Epp

Materials: A scientific calculator recommended

Attendance: This class is an **online class**. My daily lecture videos will be posted on the Canvas. Students are expected to watch and study the videos before each class. The videos can be watched multiple times. Questions will be answered during the class time and office hours. **(It is the students' responsibility to drop by the appropriate deadline. Petitions to drop after the deadline will not be considered by the instructor.)**

Homework: Homework is the key to success in this class. Plan to devote a minimum of **TWO hours** to homework for each class lesson.

Quizzes: **Three Quizzes** (33, 33, and 34 points) will be given during the last 40 minutes of the class on quiz day. No makeup quizzes. Quiz problems are similar to homework problems and lecture examples.

Midterms: **Two midterm examinations** (100 points each) will be given during the class time (60 minutes) on the midterm exam day. No makeup except for extenuating circumstances assuming the student notifies the instructor as soon as the emergency arises.

Final Exam: **One comprehensive examination** will be given from **9:15am-11:15am** on **Tuesday, March 22, 2022**. Any student missing the final will receive an F grade for the course.

Integrity: Any types of cheating are not tolerated. Corresponding school rules will be followed.

Grading:	<u>Distribution</u>		<u>Scale</u>		
			Grade	Points	Percentage
Quizzes	100		A+	473-500	95%-100%
			A	448-472	90%-94%
			A-	438-447	88%-89%
			B+	423-437	85%-87%
			B	398-422	80%-84%
Midterms	200		B-	388-397	78%-79%
			C+	373-387	75%-77%
			C	323-372	65%-74%
			D+	298-322	60%-64%
			D	288-297	58%-59%
Final Exam	200		D-	273-287	55%-57%
			F	0-272	0%-54%
	Total	500			

Math 22-03Z Tentative Schedule (Winter 2022)

Winter 2022								
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	Wk
Jan	3 INSTRUCTION BEGINS 1.1, 1.2	4	5	6	7	8	9	1
Jan	10 3.2	11 1.3, 2.1 3.3	12 2.2 3.4	13 2.3 4.1	14 3.1 Quiz #1	15 <i>Last Day to Add</i>	16 <i>Last Day to Drop with refund/credit, with no record.</i>	2
Jan	17 <i>Last day to drop without a W MLK Holiday</i>	18 Census Day 4.2	19 4.3	20 4.4	21 4.5	22	23	3
Jan	24 4.6	25 5.1	26 5.2	27 Review	28 <i>Last day to request P/NP Exam #1</i>	29	30	4
Jan / Feb	31 Solutions	1 5.3	2 5.4	3 5.5	4 5.6	5	6	5
Feb	7 6.1	8 6.2	9 6.3	10 6.4	11 Quiz #2	12	13	6
Feb	14 7.1	15 7.2	16 7.3	17 7.4	18 <i>Lincoln's B-Day Holiday</i>	19-20 <i>President's Weekend</i>		7
Feb	21 <i>Washington's B-day Holiday</i>	22 8.1	23 8.2	24 Review	25 <i>Last Day to drop with a W Exam #2</i>	26	27	8
Feb / March	28 Solutions	1 8.3	2 8.5	3 9.1	4 9.2	5	6	9
March	7 9.3	8 9.4	9 9.5	10 9.6	11 Quiz #3	12	13	10
March	14 10.1	15 10.2	16 10.3	17 10.4	18 Review	19	20	11
March	21	22 FINAL EXAM 9:15am-11:15am	23	24	25	26	27	12

Sections	Problems (Epp, Brief Ed.)
1.1	1, 2, 3, ..., 13.
1.2	1, 2, 3, ..., 12.
1.3	2, 4, 6, ..., 20.
2.1	2 - 5, 8, 9, 13 - 17, 22, 26, 28, 31, 33, 35, 42 - 44, 46.
2.2	2, 4, 8, 10, 13, 14b, 17, 18, 20, 22, 25, 27, 33, 35, 38, 41, 43, 44, 46.
2.3	2, 4, 11, 12b, 20, 21, 23, 28, 29, 31, 32, 36, 38, 40, 42.
3.1	4, 6, 7, 9, 10, 15, 16, 18, 23, 24, 28, 32.
3.2	3, 5, 8, 10, 12, 19, 21, 23, 29, 31, 33, 38, 40, 44, 47.
3.3	11, 14, 16, 17, 19, 23, 30, 35, 36, 41, 43, 44.
3.4	4, 6, 11, 12, 14, 15, 17, 19, 22, 24, 26.
4.1	5, 12, 30, 32, 36, 41, 42, 46, 52, 53, 57, 58.
4.2	5, 14, 19, 23, 26, 28, 30.
4.3	3, 5, 13, 18, 23, 24, 26, 28, 36, 37, 41, 46, 49.
4.4	2, 4, 8, 9, 15, 19, 22, 25, 30, 37, 38, 43.
4.5	7, 10, 15, 17, 20, 24, 29, 33, 34c.
4.6	2, 4, 8, 10, 11, 15, 23, 28, 33.
5.1	2, 4, 9, 11, 17, 29, 31, 43, 47, 49, 52, 53, 55, 59, 61, 63, 65, 68, 72.
5.2	4, 7, 9, 12, 16, 17, 18, 23, 27, 32.
5.3	2, 3, 7, 9, 15, 17, 20, 25, 29.
5.4	1, 3, 5, 7, 9, 15, 17, 18.
5.5	2, 4, 8, 12, 14, 16, 19, 22, 26, 32.
5.6	4, 7, 8, 13, 20, 23, 25, 33, 38, 52.
6.1	3, 6, 8, 9, 12, 14, 17, 18, 20, 23, 27, 30, 33.
6.2	2, 7, 9, 14, 19, 21, 23b, 26, 31, 35, 39.
6.3	2, 8, 13, 16, 19, 20, 32, 35, 43.
6.4	2, 3, 5, 9, 11a ⁱⁱ , 11a ⁱⁱⁱ , 11a ^v , 11b.
7.1	2, 4, 10, 12, 22, 23, 27, 35, 37, 39, 42.
7.2	2, 5, 7, 9, 11, 16, 17, 20, 23, 30, 33, 37.
7.3	2, 4, 7, 10, 11, 17, 19, 22, 24, 25.
7.4	3, 4, 8, 9, 11, 15, 17, 18, 22, 27, 34.
8.1	3, 5, 7, 8, 17, 18, 20, 21.
8.2	2, 10, 13, 17, 19, 21, 21, 26, 30, 38, 42.
8.3	2, 4, 6, 9, 10, 13, 14, 17, 19, 24, 40.
8.5	2, 4, 6, 8, 10, 12, 14.
9.1	4, 6, 8, 10, 13, 14, 16, 19, 21, 22, 24, 26.
9.2	5, 11, 14, 15, 18, 21, 22, 24, 26, 27, 30, 33, 36.
9.3	6, 11, 20, 23, 25, 29, 32, 35.
9.4	2, 4, 8, 13, 16, 19, 23, 25, 28, 30, 31, 36.
9.5	4, 5, 7, 10, 12, 14, 17, 20, 22, 24, 25, 26a-d, 28, 30.
9.6	5, 9, 11, 14, 16, 17, 30, 34, 37, 44, 49, 54.
10.1	4, 6, 9, 16, 19, 22, 26c, 27, 33, 37, 39, 40, 44.
10.2	2, 5, 6, 8, 13, 15, 20, 22, 29, 30, 32, 33, 47.
10.3	3, 7, 15, 17, 19, 23, 26, 29.
10.4	2, 3, 5, 7, 11, 14, 17, 19, 20.

Student Learning Outcome(s):

*Critique a mathematical statement for its truth value, defend choice by formulating a mathematical proof or constructing a counterexample.

*Analyze and apply patterns of discrete mathematical structures to demonstrate mathematical thinking.