Math 22-03Y,   MTWTh 8:30am-9:20am (synchronous), F (asynchronous)   Winter, 2026

SYLLABUS

Instructor:	Dr. Kejian Shi
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Office Hour:	Tuesdays: 1:00pm-2:00pm (Canvas zoom) or by appointment

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 a combination of **online synchronous (MTWTh)** and **online asynchronous (F)**. Every student is expected to attend zoom activities on canvas Monday through Thursday during the scheduled class time. My daily lecture videos will be posted on the Canvas for students to watch and study for Fridays and also other days, if needed. Questions will be answered during office hours or through email. (**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. Homework assignments are due on the test (quiz and exam) days. Each collection counts 10 points, the total is 60 points. The lowest score will be replaced by 10.

Quizzes: **Three Quizzes** (33, 33, and 34 points) will be given on canvas the quiz days. No makeup quizzes. The lowest quiz score will be replaced by the average of the two highest quiz scores.

Midterms: **Two** midterm examinations (100 points each) will be given on canvas the midterm exam day. No makeup tests. The lowest midterm score will be replaced by the percentage of the final exam if the final percentage is higher.

Final Exam: **One comprehensive examination** will be given on canvas from **7:00am to 9:00am** on **Wednesday, 3/25/2026**. Any students missing the final will receive an F grade for the course.

Test time limits: Each test (Quiz, Midterm and Final) will be given on canvas during the scheduled class time period. Everyone must successfully submit his/her solutions within the given time limits (40 minutes for a quiz, 60 minutes for a midterm, and 120 minutes for the final exam).

Integrity: Every student should do all the tests independently. Any type of cheating is not tolerated. Corresponding school rules will be followed.

Grading:

Distribution			Scale		
Homework	60		Grade	Points	Percentage
			A+	529-560	95%-100%
			A	501-528	90%-94%
Quizzes	100		A-	490-500	88%-89%
			B+	473-489	85%-87%
			B	445-472	80%-84%
Midterms	200		B-	434-444	78%-79%
			C+	417-433	75%-77%
			C	361-416	65%-74%
Final Exam	200		D+	333-360	60%-64%
	_____		D	322-332	58%-59%
			D-	305-321	55%-57%
Total	560		F	0-304	0%-54%

Tentative Schedule:

Winter 2026								
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	Wk
Jan	5 INSTRUCTION BEGINS 1.1, 1.2	6 1.3, 2.1	7 2.2	8 2.3	9 3.1	10	11	1
Jan	12 3.2	13 3.3	14 3.4	15 Quiz #1 8:40am-9:20am	16 4.1	17	18 *Last Day to Add / to Drop without a W*	2
Jan	19 *M L K Holiday*	20 Census Day 4.2	21 4.3	22 4.4	23 4.5	24	25	3
Jan / Feb	26 4.6	27 5.1	28 Review	29 Exam #1 8:30am-9:30am	30 5.2	31	1	4
Feb	2 Solutions	3 5.3	4 5.4	5 5.5	6 5.6	7	8	5
Feb	9 6.1	10 6.2	11 6.3	12 Quiz #2 8:40am-9:20am	13 *Lincoln's B-Day* *Holiday*	14 *President's Weekend*	15	6
Feb	16 *Washington's B-day* *Holiday*	17 6.4	18 7.1	19 7.2	20 7.3	21	22	7
Feb / March	23 7.4	24 8.1	25 Review	26 Exam #2 8:30am-9:30am	27 *Last Day to drop with a W* 8.2	28	1	8
March	2 Solutions	3 8.3	4 8.5	5 9.1	6 9.2	7	8	9
March	9 9.3	10 9.4	11 9.5	12 Quiz #3 8:40am-9:20am	13 9.6	14	15	10
March	16 10.1	17 10.2	18 10.3	19 10.4	20 Review	21	22	11
March	23	24	25 FINAL EXAM 7:00am-9:00am	26	27	28	29	12

Homework Problems:

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, 11aii, 11aiii, 11av, 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.

Office Hours:

M	11:30 AM - 12:30 PM	S16-A
W	11:30 AM - 12:30 PM	S16-A
T	1:00 PM - 2:00 PM	Zoom,Canvas
TH	1:00 PM - 11:00 AM	Zoom,Canvas
T	10:00 AM - 11:00 AM	Zoom,Canvas