

SYLLABUS

Instructor: Dr. Kejian Shi
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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 follow the schedule to watch and study the videos. The videos can be watched multiple times. Questions will be answered 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** (each lecture video).

Quizzes: **Three Quizzes** (33, 33, and 34 points) will be given from **8:00pm-9:00pm** on the quiz day (see schedule). 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 from **8:00pm-10:00pm** on the midterm exam day (see schedule). 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 final examination** will be given from **8:00pm-11:00pm** on **Thursday, August 4, 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%
Midterms	200		B	398-422	80%-84%
			B-	388-397	78%-79%
			C+	373-387	75%-77%
			C	323-372	65%-74%
			D+	298-322	60%-64%
Final Exam	200		D	288-297	58%-59%
			D-	273-287	55%-57%
			F	0-272	0%-54%
	Total	500			

Tentative Schedule:

	MON	TUE	WED	THU	FRI	SAT	SUN
June / July	27 1.1, 1.2, 1.3	28 2.1, 2.2, 2.3	29 Last day to get refund 3.1, 3.2, 3.3	30 3.4, 4.1 Quiz #1 8:00pm-9:00pm	1	2	3
July	4 Holiday (No class)	5 census day 4.2, 4.3, 4.4	6 4.5, 4.6 Review	7 5.1 TEST #1 8:00pm-10:00pm	8	9	10
July	11 5.2, 5.3, 5.4	12 5.5, 5.6	13 6.1, 6.2	14 6.3, 6.4 Quiz #2 8:00pm-9:00pm	15	16	17
July	18 7.1, 7.2	19 7.3, 7.4	20 8.1, 8.2 Review	21 8.3 TEST #2 8:00pm-10:00pm	22	23	24
July	25 8.4, 9.1	26 9.2, 9.3	27 Last day to drop with "W" 9.4, 9.5	28 9.6 Quiz #3 8:00pm-9:00pm	29	30	31
August	1 10.1, 10.2	2 10.3, 10.4	3 Review	4 FINAL EXAM 8:00pm-11:00pm	5	6	7

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, 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.

Office Hours: