Math 22-51Z, **MTWThF,** **Spring, 2022**

SYLLABUS

Instructor: Dr. Kejian Shi
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Office Hour: Thursday, 9:30am-10:30am 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 follow the schedule to watch and study the videos. The videos can be watched multiple times. Questions will be answered during the 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.

Quizzes: **Three Quizzes** (33, 33, and 34 points) will be given from **8:00pm-9:00pm** on the quiz day. 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. 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 from **8:00pm-11:00pm** on **Wednesday, June 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:

Distribution

Quizzes	100
Midterms	200
Final Exam	200
Total	500

Scale

Grade	Points	Percentage
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%
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%
D-	273-287	55%-57%
F	0-272	0%-54%

Math 22-50Z Tentative Schedule:

	MON	TUE	WED	THUR	FRI	SAT	SUN	Wk
APL	4 **District Flex Day**	5 **Division/Dpt Flex Day**	6 **1.1, 1.2, 1.3**	7 **2.1**	8 **2.2**	9	10	1
APL	11 **2.3**	12 **3.1**	13 **3.2**	14 **3.3**	15 **Quiz #1** **8:00pm-9:00pm**	16 Last day to add Drop for refund	17 Last day to drop with no record	2
APL	18 **3.4**	19 **4.1**	20 **4.2**	21 **4.3**	22 **4.4**	23	24	3
APL / MAY	25 **4.5**	26 **4.6**	27 **5.1**	28 **Review**	Request P/NP 29 **Exam #1** **8:00pm-10:00pm**	30	1	4
MAY	2 **Solutions**	3 **5.2**	4 **5.2, 5.3**	5 **5.3**	6 **5.5**	7	8	5
MAY	9 **5.6**	10 **6.1**	11 **6.2**	12 **6.3**	13 **Quiz #2** **8:00pm-9:00pm**	14	15	6
MAY	16 **6.4**	17 **7.1**	18 **7.2**	19 **7.3**	20 **7.4**	21	22	7
MAY	23 **8.1**	24 **8.2**	25 **8.3**	26 **Review**	Drop with "W" 27 **Exam #2** **8:00pm-10:00pm**	28	29	8
MAY / JUN	30 Memorial Day **Holiday**	31 **Solutions**	1 **9.1**	2 **9.2**	3 **9.3**	4	5	9
JUN	6 **9.4**	7 **9.5**	8 **9.5, 9.6**	9 **9.6**	10 **Quiz #3** **8:00pm-9:00pm**	11	12	10
JUN	13 **10.1**	14 **10.2**	15 **10.3**	16 **10.4**	17 **Review**	18	19	11
JUN	20 Juneteenth Day **Holiday**	21	22 **Final Exam** **8:00pm-11:00pm**	23	24	25	26	12
JUL / AUG	27 SUMMER BEGINS	28	29	30	1	2	3	1

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.