Math 22-60Z, **MTWThF,** **Winter, 2022**

SYLLABUS

Instructor: Dr. Kejian Shi
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Office Hour: Friday, 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 on daily base. Different people can watch at different time during the day. The videos can be watched multiple times. 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.

Quizzes: **Three Quizzes** (33, 33, and 34 points) will be given from **6:00pm-6:40pm** on the 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 from **6:00pm-7:00pm** 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 **6:00pm-8:00pm** 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:

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 22-60Z Tentative Schedule (Winter 2022)

Winter 2022

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	Wk
Jan	3 INSTRUCTION BEGINS 1.1, 1.2	4 1.3, 2.1	5 2.2	6 2.3	7 3.1	8	9	1
Jan	10 3.2	11 3.3	12 3.4	13 4.1	14 Quiz #1	15 *Last Day to Add*	16 *Last Day to Drop with refund/credit, with no record.*	2
Jan	17 *Last day to drop without a W* M L K Holiday	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 *Last day to request P/NP* Exam #1	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 *Lincoln's B-Day* *Holday*	19 *President's Weekend*	20	7
Feb	21 *Washington's B-day* *Holiday*	22 8.1	23 8.2	24 Review	25 *Last Day to drop with a W* Exam #2	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 6:00pm-8:00pm	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, 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.