

MAT-118: Mathematical Thinking

season: summer-I 2019

location: TuTh 1:30pm-4:55pm Socbehav Sci S218

office hour: Mo 8:00am-9:00am at Math Tower S-240A

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instructor: **Jin-Cheng Guu**

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Welcome to MAT-118 Mathematical Thinking. We will walk through some basic ideas in mathematics that could be useful or even practical in real life. I will try my best to explain and hopefully we will enjoy it!

Course Information

Textbooks are not needed throughout this course. How would I learn you may ask: participate hard, pay attention, discuss with classmates, and take notes!

Calculators are not needed either. Mathematical operations in this class all boil down to basic additions and multiplications of integers. It is a good practice to do that with a pencil and paper. It is also the only way to obtain 'mathematical thinking'.

Homework won't be counted in your final grade. However, it is very important, if not the most crucial, to keep the problems we will discuss in mind. Try to recall what we did and how we approached a problem frequently.

Quiz will be taken in each class: its purpose is to assess how much you have learned through the discussion. *No curving, no make-ups.*

Distribution of Grades

10% participation

15% midterm (I)

15% midterm (II)

15% final

45% quizzes

Letter Grades

[00, 55): F

[55, 60): C- [60, 65): C [65, 70): C+

[70, 75): B- [75, 80): B [80, 85): B+

[85, 90): A- [90, 100]: A

Schedule of a lecture day

1:30 - 2:30pm: session I

2:30 - 2:40pm: rest

2:40 - 3:40pm: session II

3:40 - 3:50pm: rest

3:50 - 4:55pm: quiz and further discussions

Schedule

Week	Date	Topic(s) Covered
1	5/28 Tu	modulo: the stone picking game
	5/30 Th	recursion: the Hanoi tower game
2	6/04 Tu	complexity and estimate
	6/06 Th	Midterm (I)
3	6/11 Tu	

	6/13 Th	
4	6/18 Tu	
	6/20 Th	Midterm (II)
5	6/25 Tu	
	6/27 Th	
6	7/02 Tu	
	7/04 Th	Final