National Taiwan University of Science and Technology

2020 Summer Program

MATH 118 Finite Mathematics

Course Outline

Term: June 22-July 17, 2020

Class Hours: 10:30-13:00 (Monday through Friday)

Course Code: MATH 118

Instructor: Professor Mark Sepanski

Home Institution: Baylor University

Office Hours: TBA and by appointment

Email: Mark_Sepanski@baylor.ed

Credit: 4

Class Hours: This course will have 72 class hours, including 40 lecture hours, 10 lecturer office hours, 10-hour TA discussion sessions, 2-hour review sessions, 10-hour extra classes.

Course Description:

Finite mathematics is an eclectic collection of mathematical techniques that deal with finite processes. This course will cover topics in counting, set theory, probability, special functions, induction, properties of the integers, modular arithmetic, rings, and finite fields.

Required Textbook:

Discrete and Combinatorial Mathematics: An Applied Introduction, Fifth Edition, R. Grimaldi, Pearson, 2003.

Grading & Evaluation:

Homework

Homework will be assigned daily in class and is due at the beginning of the next class. Only a subset of homework problems will be graded. For its contribution to your overall course average, each homework assignment will be weighted equally and the lowest homework score will be dropped.

Course Grade

Your overall course average will be calculated with the weights as displayed in the table below.

Overall Course Average Weights

Homework	20%
Midterm	40%
Final	40%

There is no curving and no extra credit. Your course grade will be calculated as shown in the table below.

Course Grade

Overall Course Average	Letter Grade
90-100	A
80-89	B
72-79	C
50-71	D
0-49	F

Course Schedule:

Week	Date	Chapter	Sections
	06/22/2020	1	1.1 Rules of Sum and Product 1.2 Permutations 1.3 Combinations
1	06/23/2020	1 & 3	1.4 Combinations with Repetition 3.1 Sets and Subsets 3.2 Set Operations
	06/24/2020	3	3.3 Counting with Venn Diagrams 3.4 Introduction to Probability
	06/25/2020	8 & 5	8.1 Inclusion & Exclusion 5.5 The Pigeonhole Principle
	06/29/2020	5	5.1 Cartesian Products & Relations 5.2 Functions & Injective Functions
2	06/30/2020	5	5.3 Stirling Numbers of the Second Kind 5.6 Function Composition & Inverse Functions
	07/01/2020		Overview 1, 3, 8, & 5
	07/02/2020		Midterm
	07/06/2020	4	4.1 & 4.2 Induction and Recursion 4.3 Division with Remainder
3	07/07/2020	4	4.4 gcd and lcm 4.5 The Fundamental Theorem of Arithmetic
	07/08/2020	7 & 14	7.1 & 7.4 Equivalence Relations 14.1 Rings
	07/09/2020	14	14.3 The Integers Modulo n
	07/13/2020	17	17.1 Polynomial Rings 17.2 Finite Fields
4	07/14/2020		Overview 4, 7, 14, & 17
	07/15/2020		Final Exam
	07/16/2020		Discussion of Final Exam