

MATH 315

Applied Combinatorics (4 units)

Course Outline

Chapter(s)	Topics	# of weeks
1	Pigeonhole principle	0.5
2	Mathematical induction	0.5
3	Counting techniques	1.0
4	Binomial coefficients	1.0
5	Partitions	1.0
6	Permutations	1.5
7	Inclusion-exclusion principle	1.0
8	Generating functions	3.0
9–10	Basics of graph theory. Trees	2.0
11–14	Selected applications (as time permits)	2.0
	Tests	0.5

Textbook: *A Walk Through Combinatorics*, 4th edition, by M. Bona.

Adopted: Fall 2018.